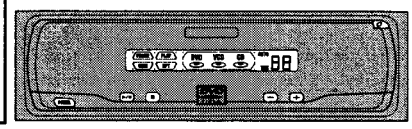
PION-05920

Service Manual

SDV-P7/UC



ORDER NO.
CRT2688

DVD PLAYER

SDV-P7

UC,EW,ES/RC,ES/RD

● This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech. Module	Remarks
CX-954	CRT2670	MS2	DVD Mech. module:Circuit Description, Mech.Description, Disassembly

● **Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.**

● **DVD Player Service Precautions**

1. Never adjust the LD VR in the pickup unit to protect the pickup from electrical damages.
2. For pickup unit(service)(CXX1530) handling, please refer to"Disassembly"(see page 89).
   During replacement, handling precautions shall be taken to prevent an electrostatic discharge(set the short switch of the pickup unit to the SHORT side).
3. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.
4. Please adjusting the skew after changing the pickup unit(see page 71).

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K-ZZA. MAY 2001

1. SAFETY INFORMATION

1.1 UC

CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.
Health & Safety Code Section 25249.6 - Proposition 65

1.2 EW

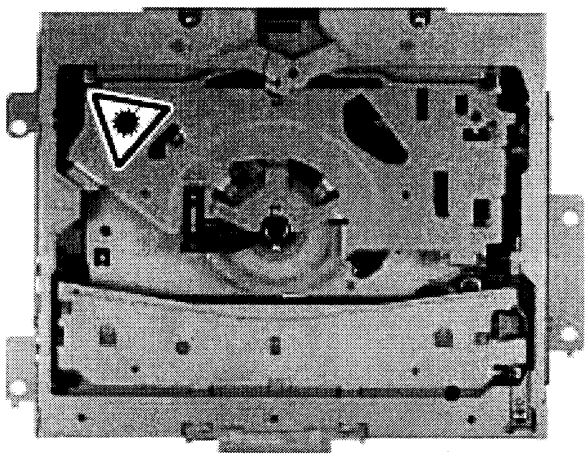
1. Safety Precautions for those who Service this Unit.

- **Follow the adjustment steps (see pages 68 through 88)in the service manual when servicing this unit. When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.**

Caution:

1. **During repair or tests, minimum distance of 13cm from the focus lens must be kept.**
2. **During repair or tests, do not view laser beam for 10 seconds or longer.**

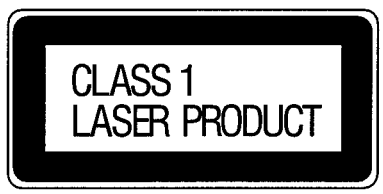
2. The triangular label is attached to the mechanism unit frame.



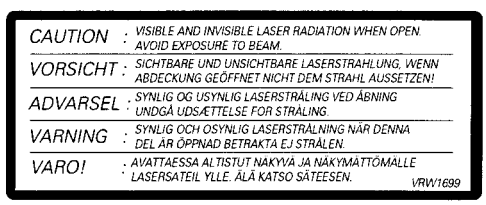
CAUTION
This product contains a laser diode of higher class than 1. To ensure continued safety, do not remove any covers or attempt to gain access to the inside of the product.
Refer all servicing to qualified personnel.

The following caution label appears on your unit.

Location: on the bottom of the unit



On the top of the player.


CAUTION : VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
VORSICHT : SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN!
ADVARSEL : SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARNING : SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD BETRAKTA EJ STRÅLEN.
VARO! : AVATTAESSA ALTISTUT NAKYVÄ JA NÄKYMÄTTÖMÄLLE LASERSATEIL YLLE. ÄLÄ KATSO SÄTEESEN.
VRW1699

WARNING!

The AEL (accessible emission level)of the laser power output is less than CLASS 1 but the laser component is capable of emitting radiation exceeding the limit for CLASS 1.
A specially instructed person should do servicing operation of the apparatus.

Laser diode characteristics

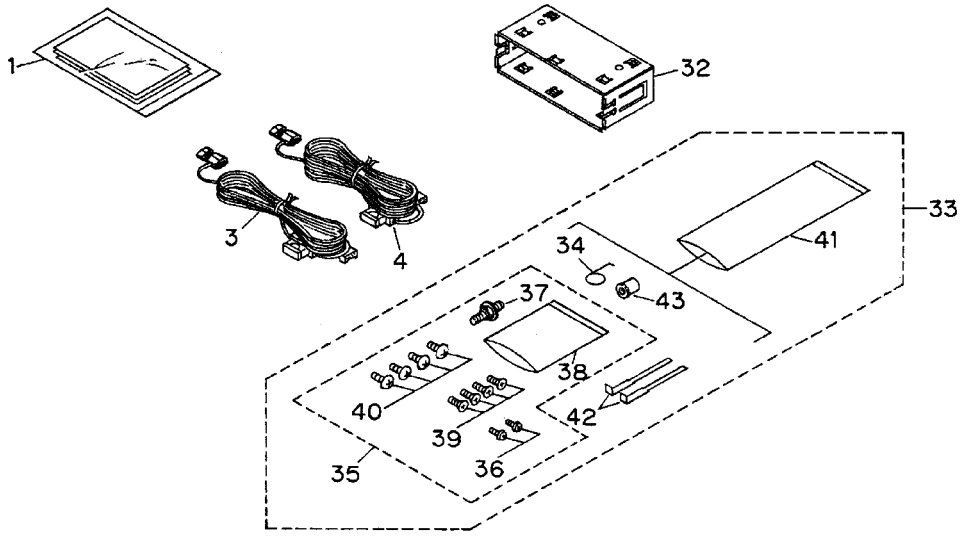
Wave length:
DVD:640~660nm
CD:770~810nm
Maximum output:2.44mw(Emitting period :9sec.)
DVD:743mw(Emitting period : unlimited)

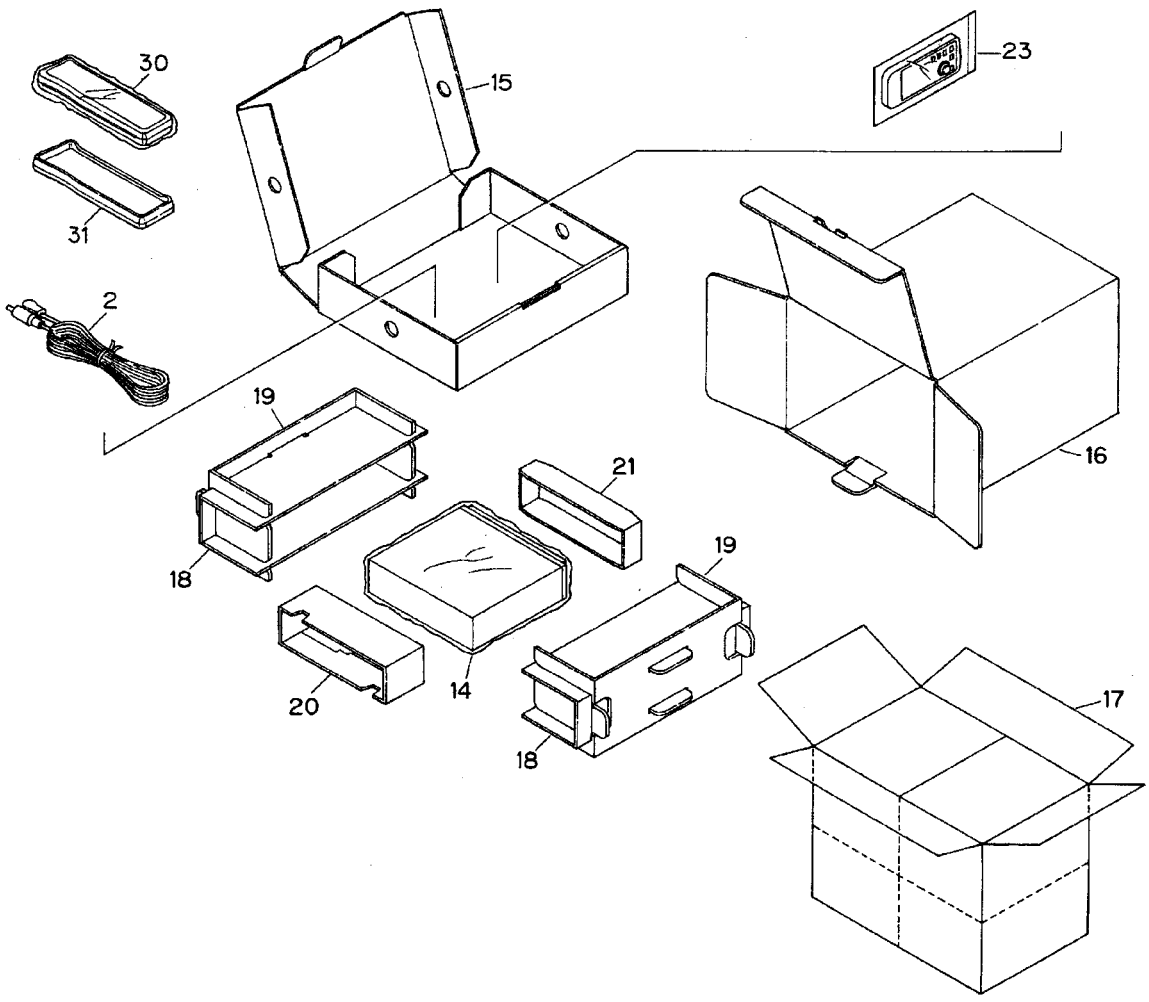
Additionla Laser Caution

Transistors Q1104 and Q1108 in PCB drive the laser diodes for DVD and CD respectively. When Q1104 or Q1108 is shorted between their terminals, the laser diodes for DVD or CD will radiate beam. If the top cover is removed with no disc loaded while such short-circuit is continued, the naked eyes may be exposed to the laser beam.

2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING(SDV-P7/UC)





NOTE:

- Parts marked by "*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.

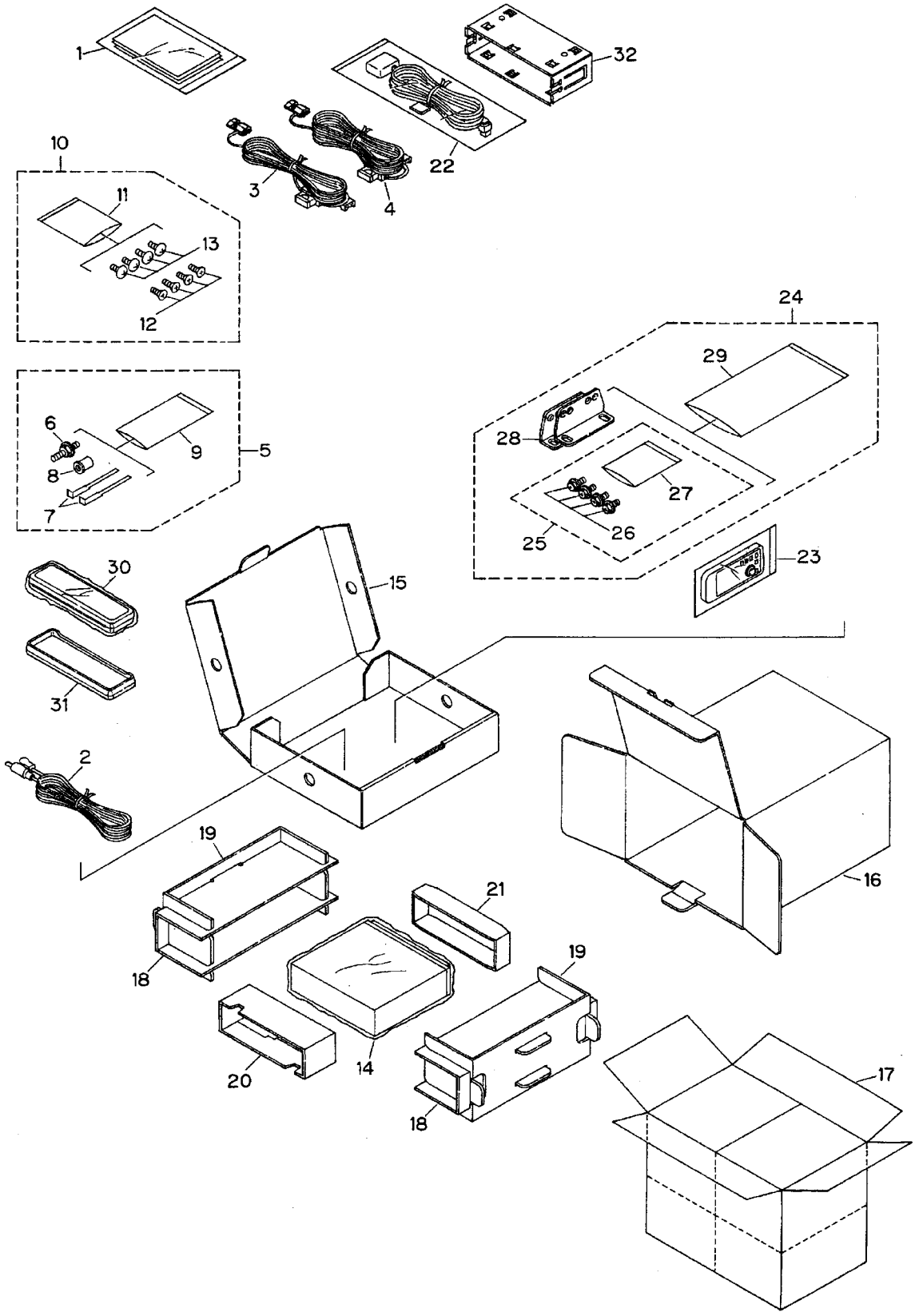
● PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
*	1-1	Card	ARY1048
	1-2	Polyethylene Bag	CEG1116
	1-3	Owner's Manual	CRB1700
	1-4	Owner's Manual	CRB1703
	1-5	Installation Manual	CRD3465
*	1-6	Caution Card	CRP1252
	2	Cord	CDE6576
	3	Cord Assy(45cm)	CDE6588
	4	Cord Assy(6m)	CDE6682
	5-13	•••••	
	14	Polyethylene Bag	CEG1173
	15	Sub Carton	CHG4392
	16	Carton	CHG4462
	17	Contain Box	CHL4462
	18	Protector	CHP2383
	19	Protector	CHP2384
	20	Protector	CHP2386
	21	Protector	CHP2432
	22	•••••	
	23	Remote Control Unit	CXB7969
	24-29	•••••	
	30	Case Assy	CXB3520
	31	Panel	CNS6552
	32	Holder	CNC8659
	33	Accessory Assy	CEA2773
	34	Spring	CBH-865
	35	Screw Assy	CEA2796
	36	Screw	BPZ20P060FZK
	37	Screw	CBA1002
*	38	Polyethylene Bag	CEG-127
	39	Screw	CRZ50P090FMC
	40	Screw	TRZ50P080FMC
*	41	Polyethylene Bag	CEG-158
	42	Handle	CNC5395
	43	Bush	CNV3930

● Owner's Manual, Installation Manual

Model	Part No.	Language
SDV-P7/UC	CRB1700	English
	CRB1703	French
	CRD3465	English, French

2.2 PACKING(SDV-P7/EW)



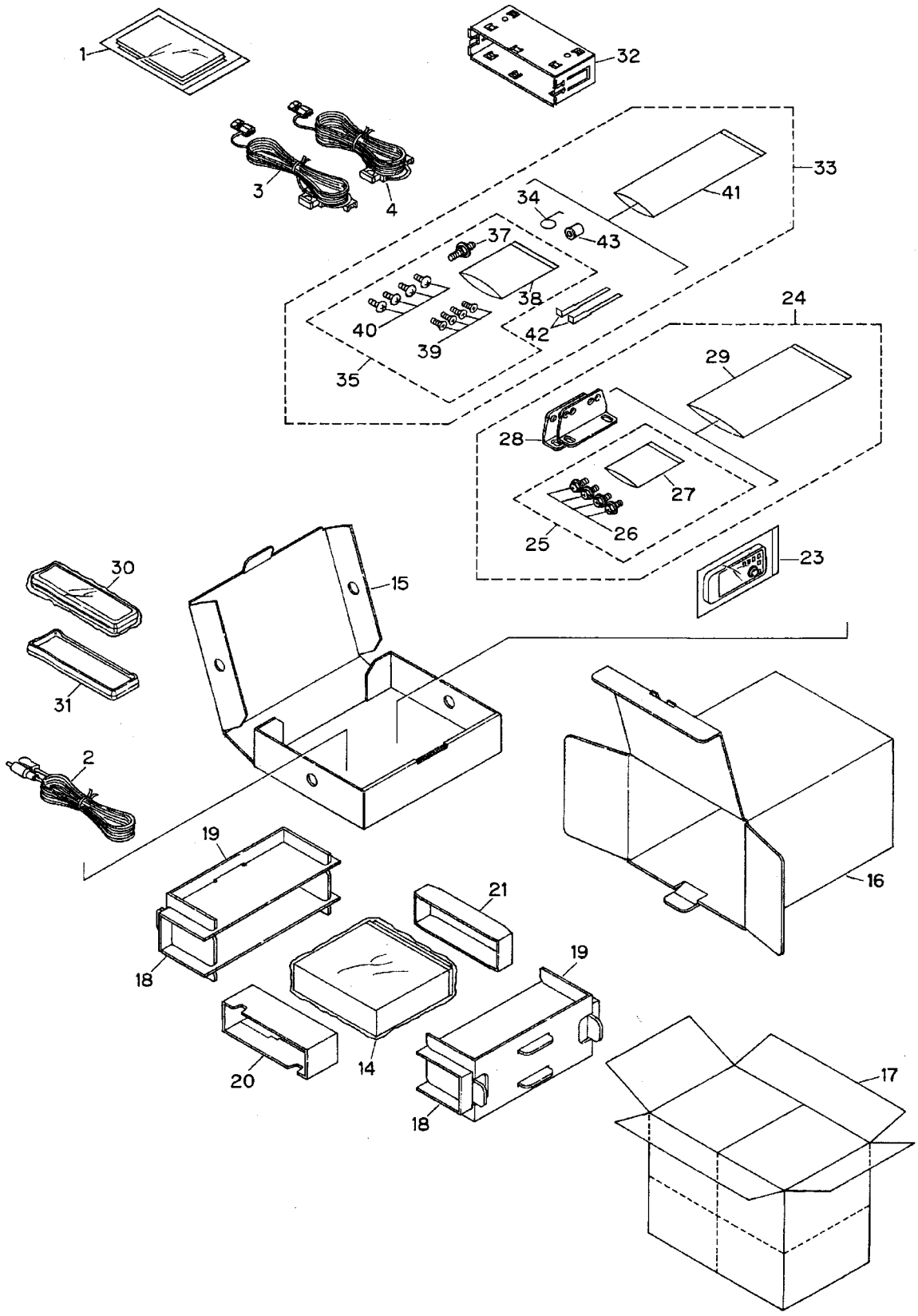
● PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1-1	Polyethylene Bag	CEG1116
	1-2	Owner's Manual	CRB1700
	1-3	Owner's Manual	CRB1701
	1-4	Owner's Manual	CRB1702
	1-5	Owner's Manual	CRB1703
	1-6	Owner's Manual	CRB1704
	1-7	Owner's Manual	CRB1705
	1-8	Installation Manual	CRD3464
*	1-9	Caution Card	CRP1251
*	1-10	Caution Card	CRP1252
*	1-11	Warranty Card	CRY1157
	2	Cord	CDE6576
	3	Cord Assy(45cm)	CDE6588
	4	Cord Assy(6m)	CDE6682
	5	Accessory Assy	CEA1917
	6	Screw	CBA1284
	7	Handle	CNC5395
	8	Bush	CNV1009
*	9	Polyethylene Bag	E36-615
	10	Screw Assy	CEA1926
*	11	Polyethylene Sheet	CNM5157
	12	Screw	CRZ50P090FMC
	13	Screw	TRZ50P080FMC
	14	Polyethylene Bag	CEG-162
	15	Sub Carton	CHG4392
	16	Carton	CHG4396
	17	Contain Box	CHL4396
	18	Protector	CHP2383
	19	Protector	CHP2384
	20	Protector	CHP2386
	21	Protector	CHP2432
	22	Remote Sensor Assy	CXB7618
	23	Remote Control Unit	CXB7969
	24	Accessory Assy	CEA2827
	25	Screw Assy	CEA2938
	26	Screw(M6x16)	CBA1295
*	27	Polyethylene Bag	E36-613
	28	Angle	CNC9520
*	29	Polyethylene Bag	E36-637
	30	Case Assy	CXB3520
	31	Panel	CNS6552
	32	Holder	CNC8659

● Owner's Manual, Installation Manual

Model	Part No.	Language
SDV-P7/EW	CRB1700	English
	CRB1701	Spanish
	CRB1702	German
	CRB1703	French
	CRB1704	Italian
	CRB1705	Dutch
	CRD3464	English, Spanish, French, German, Italian, Dutch

2.3 PACKING(SDV-P7/ES/RD, ES/RC)



● PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1-1	Polyethylene Bag	CEG1116
	1-2	Owner's Manual	CRB1700
	1-3	Installation Manual(ES/RD)	CRB1738
		Installation Manual(ES/RC)	CRD3466
*	1-4	Caution Card	CRP1252
	1-5	Owner's Manual(ES/RC)	CRB1706
	2	Cord	CDE6576
	3	Cord Assy(45cm)	CDE6588
	4	Cord Assy(6m)	CDE6682
	5-13	•••••	
	14	Polyethylene Bag	CEG-162
	15	Sub Carton	CHG4392
	16	Carton(ES/RD)	CHG4464
		Carton(ES/RC)	CHG4463
	17	Contain Box(ES/RD)	CHL4464
		Contain Box(ES/RC)	CHL4463
	18	Protector	CHP2383
	19	Protector	CHP2384
	20	Protector	CHP2386
	21	Protector	CHP2432
	22	•••••	
	23	Remote Control Unit	CXB7969
	24	Accessory Assy	CEA2828
	25	Screw Assy	CEA2938
	26	Screw(M6x16)	CBA1295
*	27	Polyethylene Bag	E36-613

Mark	No.	Description	Part No.
	28	Angle	CNC9521
*	29	Polyethylene Bag	E36-637
	30	Case Assy	CXB3520
	31	Panel	CNS6553
	32	Holder	CNC8659
	33	Accessory Assy	CEA2002
	34	Spring	CBH-865
	35	Screw Assy	CEA2003
	36	•••••	
	37	Screw	CBA1284
*	38	Polyethylene Bag	CEG-127
	39	Screw	CRZ50P090FMC
	40	Screw	TRZ50P080FMC
*	41	Polyethylene Bag	CEG-158
	42	Handle	CNC5395
	43	Bush	CNV1009

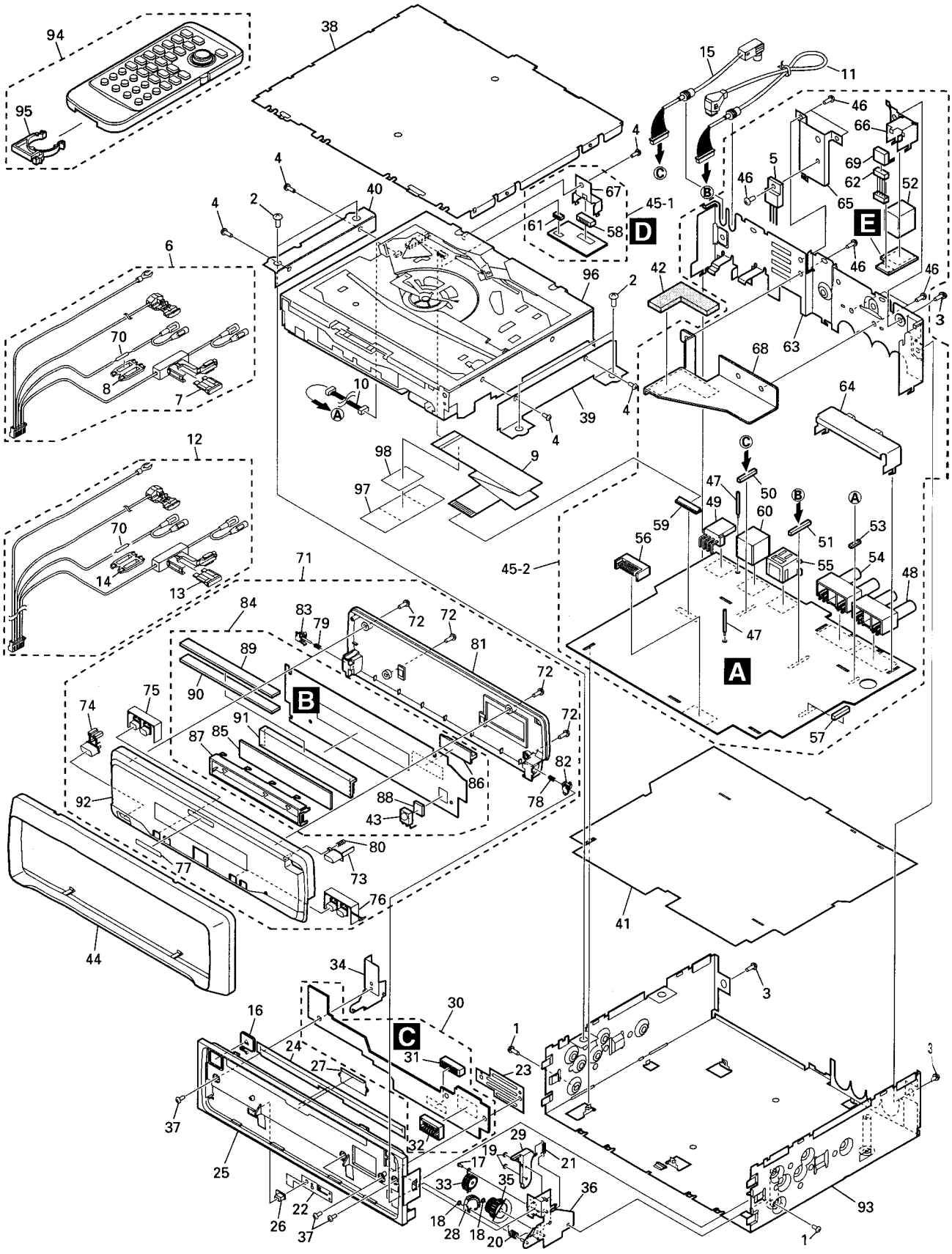
● Owner's Manual, Installation Manual

Model	Part No.	Language
SDV-P7/ES/RC	CRB1700	English
	CRB1706	Chinese
	CRD3466	English, Chinese

● Owner's Manual, Installation Manual

Model	Part No.	Language
SDV-P7/ES/RD	CRB1700	English
	CRB1738	English

2.4 EXTERIOR(SDV-P7/UC)

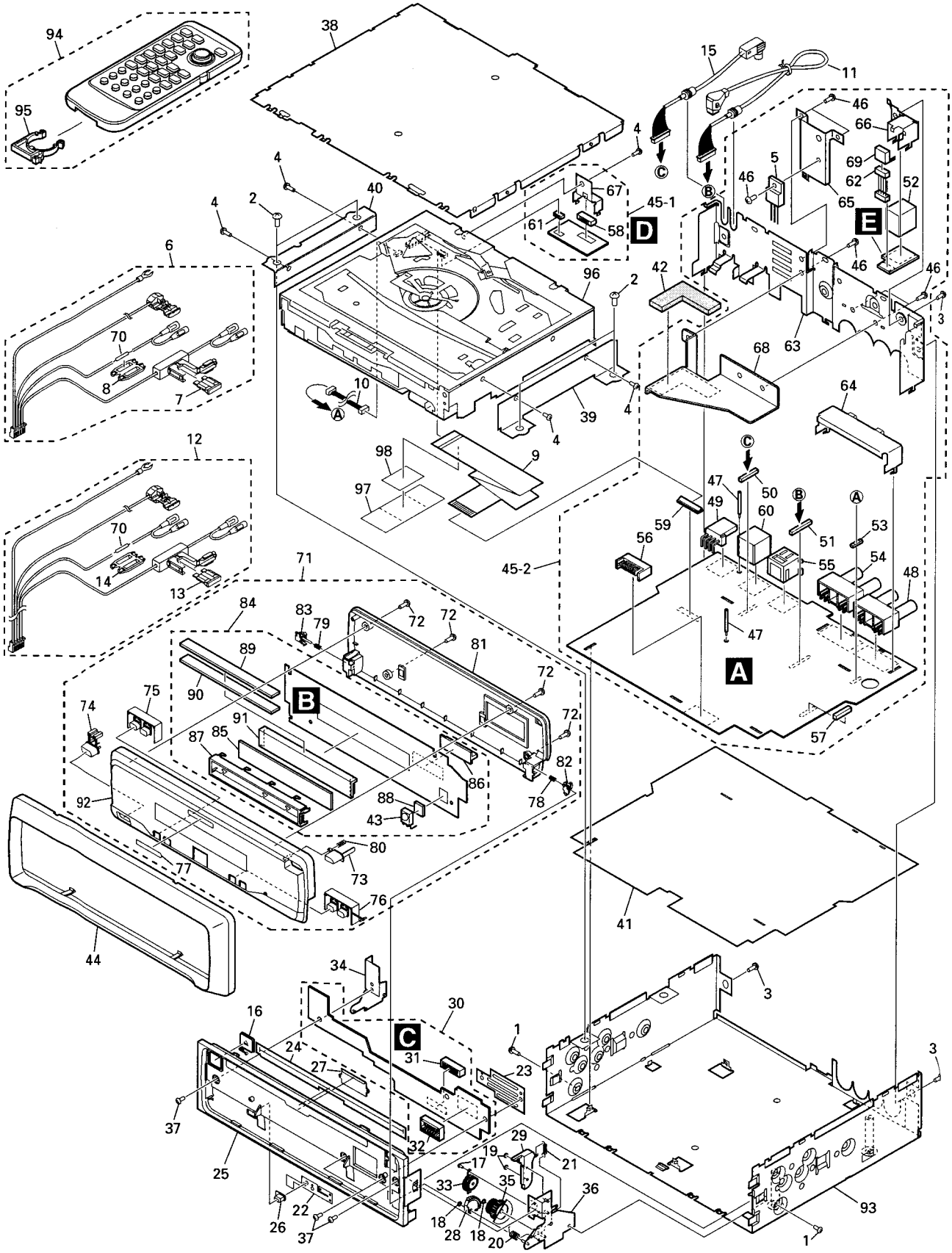


● EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ30P040FZK
	2	Screw	BSZ26P060FMC
	3	Screw	BSZ30P060FMC
	4	Screw(M2x2.2)	CBA1419
	5	Transistor(Q907)	2SD2396
	6	Cord Assy	CDE6588
	7	Fuse(4A)	CEK1001
	8	Cap	CNS1472
	9	Cable	CDE6600
	10	Cord	CDE6601
	11	Cord Assy	CDE6606
	12	Cord Assy	CDE6682
	13	Fuse(4A)	CEK1001
	14	Cap	CNS1472
	15	Cord Assy	CDE6721
	16	Button(EJECT)	CAC6839
	17	Screw(M2x2)	CBA1176
	18	Washer	CBF1038
	19	Washer	CBF1039
	20	Spring	CBH2428
	21	Spring	CBH2429
	22	Spring	CBL1512
	23	Holder	CNC9096
	24	Cover	CNM6854
	25	Panel	CNS6278
	26	Pin	CNV6486
	27	Lighting Conductor	CNV6487
	28	Gear	CNV6507
	29	Arm	CNV6508
	30	Panel PCB Unit	CWM7887
	31	Socket(CN851)	CKS3550
	32	Connector(CN852)	CKS4462
	33	Damper Unit	CXB5070
	34	Holder Unit	CXB6357
	35	Clutch Unit	CXB6358
	36	Holder Unit	CXB7506
	37	Screw	IMS20P045FZK
	38	Case	CNB2672
	39	Bracket	CNC9396
	40	Bracket	CNC9397
	41	Insulator	CNM7258
	42	Sheet	CNM7457
	43	IC(IC861)	TSOP1840SB1
	44	Panel	CNS6552
	45	Audio Control Unit	CWM7684
	46	Screw	BSZ26P060FMC
	47	Clamper	CEF1008
	48	Pin Jack(CN202)	CKB1049
	49	Plug(CN901)	CKS-461
*	50	Plug(CN701)	CKS-792

Mark	No.	Description	Part No.
	51	Plug(CN101)	CKS1043
	52	Connector(CN304)	CKS2104
	53	Connector(CN301)	CKS3124
	54	Pin Jack(CN161)	CKS3144
	55	Connector(CN102)	CKS3408
	56	Plug(CN801)	CKS3537
	57	Connector(CN601)	CKS3814
	58	Connector(CN203)	CKS3902
	59	Connector(CN201)	CKS4052
	60	Connector(CN702)	CKS4362
	61	Connector(CN204)	CKS4496
	62	Connector(CN302)	CKS4533
	63	Panel	CNB2673
	64	Holder	CNC9392
	65	Holder	CNC9393
	66	Holder	CNC9394
	67	Holder	CNC9502
	68	Heat Sink	CNC9518
	69	Connector(CN303)	HKS-193
	70	Resistor	RS1/2PMF102J
	71	Grille Panel Assy	CXB8306
	72	Screw	BPZ20P100FZK
	73	Button(OPEN)	CAC6780
	74	Button(POWER)	CAC6989
	75	Button(PLAY/PAUSE, STOP)	CAC6990
	76	Button(+,-)	CAC6991
*	77	Badge	CAH1754
	78	Spring	CBH2430
	79	Spring	CBH2431
	80	Spring	CBH2491
	81	Cover	CNS6282
	82	Holder	CNV6505
	83	Holder	CNV6506
	84	Keyboard Unit	CWM7888
	85	LCD	CAW1687
	86	Connector(CN861)	CKS4524
	87	Holder	CNC9395
	88	Cushion	CNM7260
	89	Spacer	CNM7585
	90	Rubber	CNV6708
	91	Lighting Conductor	CNV6709
	92	Grille Unit	CXB7539
	93	Chassis Unit	CXB7243
	94	Remote Control Unit	CXB7969
	95	Cover	CZN5357
	96	DVD Mechanism Module(MS2)	CXK6111
	97	Insulator	CNM7533
	98	Ferrite	CTX1086

2.5 EXTERIOR(SDV-P7/EW)

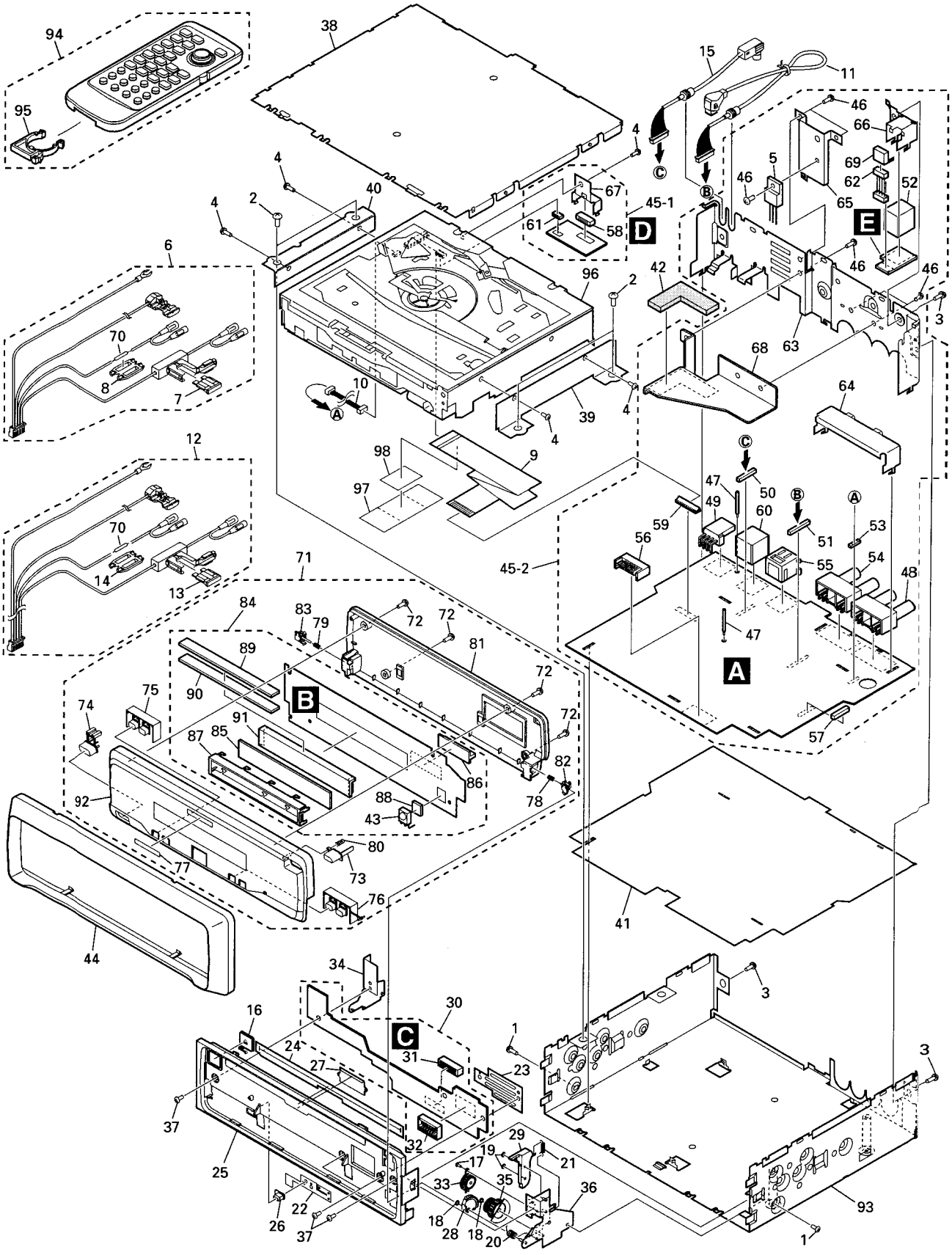


● EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ30P040FZK
	2	Screw	BSZ26P060FMC
	3	Screw	BSZ30P060FMC
	4	Screw(M2x2.2)	CBA1419
	5	Transistor(Q907)	2SD2396
	6	Cord Assy	CDE6588
	7	Fuse(4A)	CEK1001
	8	Cap	CNS1472
	9	Cable	CDE6600
	10	Cord	CDE6601
	11	Cord Assy	CDE6606
	12	Cord Assy	CDE6682
	13	Fuse(4A)	CEK1001
	14	Cap	CNS1472
	15	Cord Assy	CDE6721
	16	Button(EJECT)	CAC6839
	17	Screw(M2x2)	CBA1176
	18	Washer	CBF1038
	19	Washer	CBF1039
	20	Spring	CBH2428
	21	Spring	CBH2429
	22	Spring	CBL1512
	23	Holder	CNC9096
	24	Cover	CNM6854
	25	Panel	CNS6278
	26	Pin	CNV6486
	27	Lighting Conductor	CNV6487
	28	Gear	CNV6507
	29	Arm	CNV6508
	30	Panel PCB Unit	CWM7887
	31	Socket(CN851)	CKS3550
	32	Connector(CN852)	CKS4462
	33	Damper Unit	CXB5070
	34	Holder Unit	CXB6357
	35	Clutch Unit	CXB6358
	36	Holder Unit	CXB7506
	37	Screw	IMS20P045FZK
	38	Case	CNB2672
	39	Bracket	CNC9396
	40	Bracket	CNC9397
	41	Insulator	CNM7258
	42	Sheet	CNM7457
	43	IC(IC861)	TSOP1840SB1
	44	Panel	CNS6552
	45	Audio Control Unit	CWM7683
	46	Screw	BSZ26P060FMC
	47	Clamper	CEF1008
	48	Pin Jack(CN202)	CKB1049
	49	Plug(CN901)	CKS-461
*	50	Plug(CN701)	CKS-792

Mark	No.	Description	Part No.
	51	Plug(CN101)	CKS1043
	52	Connector(CN304)	CKS2104
	53	Connector(CN301)	CKS3124
	54	Pin Jack(CN161)	CKS3144
	55	Connector(CN102)	CKS3408
	56	Plug(CN801)	CKS3537
	57	Connector(CN601)	CKS3814
	58	Connector(CN203)	CKS3902
	59	Connector(CN201)	CKS4052
	60	Connector(CN702)	CKS4362
	61	Connector(CN204)	CKS4496
	62	Connector(CN302)	CKS4533
	63	Panel	CNB2673
	64	Holder	CNC9392
	65	Holder	CNC9393
	66	Holder	CNC9394
	67	Holder	CNC9502
	68	Heat Sink	CNC9518
	69	Connector(CN303)	HKS-193
	70	Resistor	RS1/2PMF102J
	71	Grille Panel Assy	CXB8305
	72	Screw	BPZ20P100FZK
	73	Button(OPEN)	CAC6780
	74	Button(POWER)	CAC6989
	75	Button(PLAY/PAUSE, STOP)	CAC6990
	76	Button(+,-)	CAC6991
*	77	Badge	CAH1754
	78	Spring	CBH2430
	79	Spring	CBH2431
	80	Spring	CBH2491
	81	Cover	CNS6282
	82	Holder	CNV6505
	83	Holder	CNV6506
	84	Keyboard Unit	CWM7888
	85	LCD	CAW1687
	86	Connector(CN861)	CKS4524
	87	Holder	CNC9395
	88	Cushion	CNM7260
	89	Spacer	CNM7585
	90	Rubber	CNV6708
	91	Lighting Conductor	CNV6709
	92	Grille Unit	CXB7538
	93	Chassis Unit	CXB7242
	94	Remote Control Unit	CXB7969
	95	Cover	CZN5357
	96	DVD Mechanism Module(MS2)	CXK6111
	97	Insulator	CNM7533
	98	Ferrite	CTX1086

2.6 EXTERIOR(SDV-P7/ES/RD,/ES/RC)

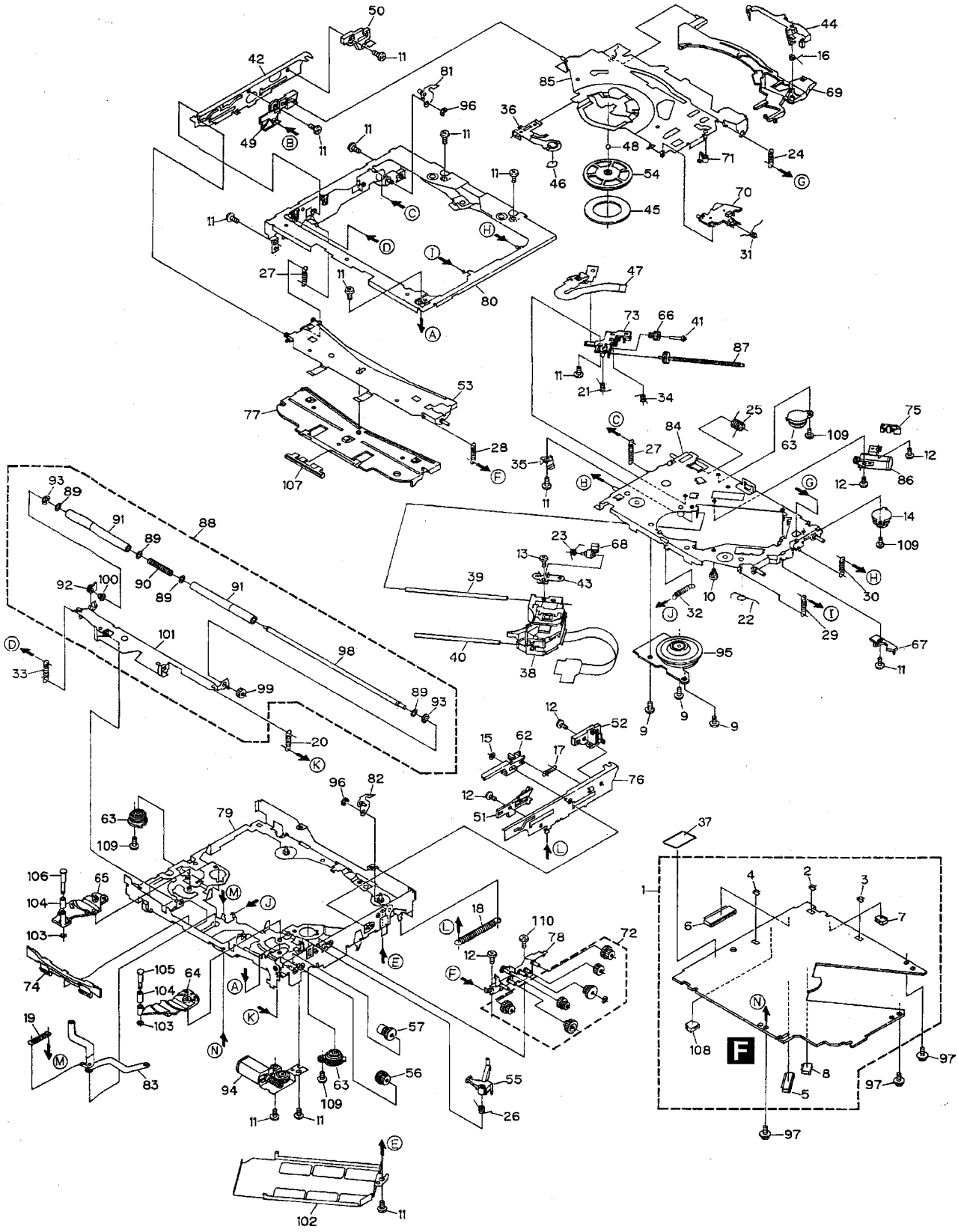


● EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ30P040FZK
	2	Screw	BSZ26P060FMC
	3	Screw	BSZ30P060FMC
	4	Screw(M2x2.2)	CBA1419
	5	Transistor(Q907)	2SD2396
	6	Cord Assy	CDE6588
	7	Fuse(4A)	CEK1001
	8	Cap	CNS1472
	9	Cable	CDE6600
	10	Cord	CDE6601
	11	Cord Assy	CDE6606
	12	Cord Assy	CDE6682
	13	Fuse(4A)	CEK1001
	14	Cap	CNS1472
	15	Cord Assy	CDE6721
	16	Button(EJECT)	CAC6839
	17	Screw(M2x2)	CBA1176
	18	Washer	CBF1038
	19	Washer	CBF1039
	20	Spring	CBH2428
	21	Spring	CBH2429
	22	Spring	CBL1512
	23	Holder	CNC9096
	24	Cover	CNM6854
	25	Panel	CNS6278
	26	Pin	CNV6486
	27	Lighting Conductor	CNV6487
	28	Gear	CNV6507
	29	Arm	CNV6508
	30	Panel PCB Unit	CWM7887
	31	Socket(CN851)	CKS3550
	32	Connector(CN852)	CKS4462
	33	Damper Unit	CXB5070
	34	Holder Unit	CXB6357
	35	Clutch Unit	CXB6358
	36	Holder Unit	CXB7506
	37	Screw	IMS20P045FZK
	38	Case	CNB2693
	39	Bracket	CNC9396
	40	Bracket	CNC9397
	41	Insulator	CNM7258
	42	Sheet	CNM7457
	43	IC(IC861)	TSOP1840SB1
	44	Panel	CNS6553
	45	Audio Control Unit(ES/RD)	CWM7686
		Audio Control Unit(ES/RC)	CWM7685
	46	Screw	BSZ26P060FMC
	47	Clamper	CEF1008
	48	Pin Jack(CN202)	CKB1049
	49	Plug(CN901)	CKS-461
*	50	Plug(CN701)	CKS-792

Mark	No.	Description	Part No.
	51	Plug(CN101)	CKS1043
	52	Connector(CN304)	CKS2104
	53	Connector(CN301)	CKS3124
	54	Pin Jack(CN161)	CKS3144
	55	Connector(CN102)	CKS3408
	56	Plug(CN801)	CKS3537
	57	Connector(CN601)	CKS3814
	58	Connector(CN203)	CKS3902
	59	Connector(CN201)	CKS4052
	60	Connector(CN702)	CKS4362
	61	Connector(CN204)	CKS4496
	62	Connector(CN302)	CKS4533
	63	Panel	CNB2673
	64	Holder	CNC9392
	65	Holder	CNC9393
	66	Holder	CNC9394
	67	Holder	CNC9502
	68	Heat Sink	CNC9518
	69	Connector(CN303)	HKS-193
	70	Resistor	RS1/2PMF102J
	71	Grille Panel Assy(ES/RD)	CXB8308
		Grille Panel Assy(ES/RC)	CXB8307
	72	Screw	BPZ20P100FZK
	73	Button(OPEN)	CAC6780
	74	Button(POWER)	CAC6989
	75	Button(PLAY/PAUSE, STOP)	CAC6990
	76	Button(+,-)	CAC6991
*	77	Badge	CAH1754
	78	Spring	CBH2430
	79	Spring	CBH2431
	80	Spring	CBH2491
	81	Cover	CNS6282
	82	Holder	CNV6505
	83	Holder	CNV6506
	84	Keyboard Unit	CWM7888
	85	LCD	CAW1687
	86	Connector(CN861)	CKS4524
	87	Holder	CNC9395
	88	Cushion	CNM7260
	89	Spacer	CNM7585
	90	Rubber	CNV6708
	91	Lighting Conductor	CNV6709
	92	Grille Unit	CXB7540
	93	Chassis Unit	CXB7620
	94	Remote Control Unit	CXB7969
	95	Cover	CZN5357
	96	DVD Mechanism Module(MS2)	CXK6111
	97	Insulator	CNM7533
	98	Ferrite	CTX1086

2.7 DVD MECHANISM MODULE

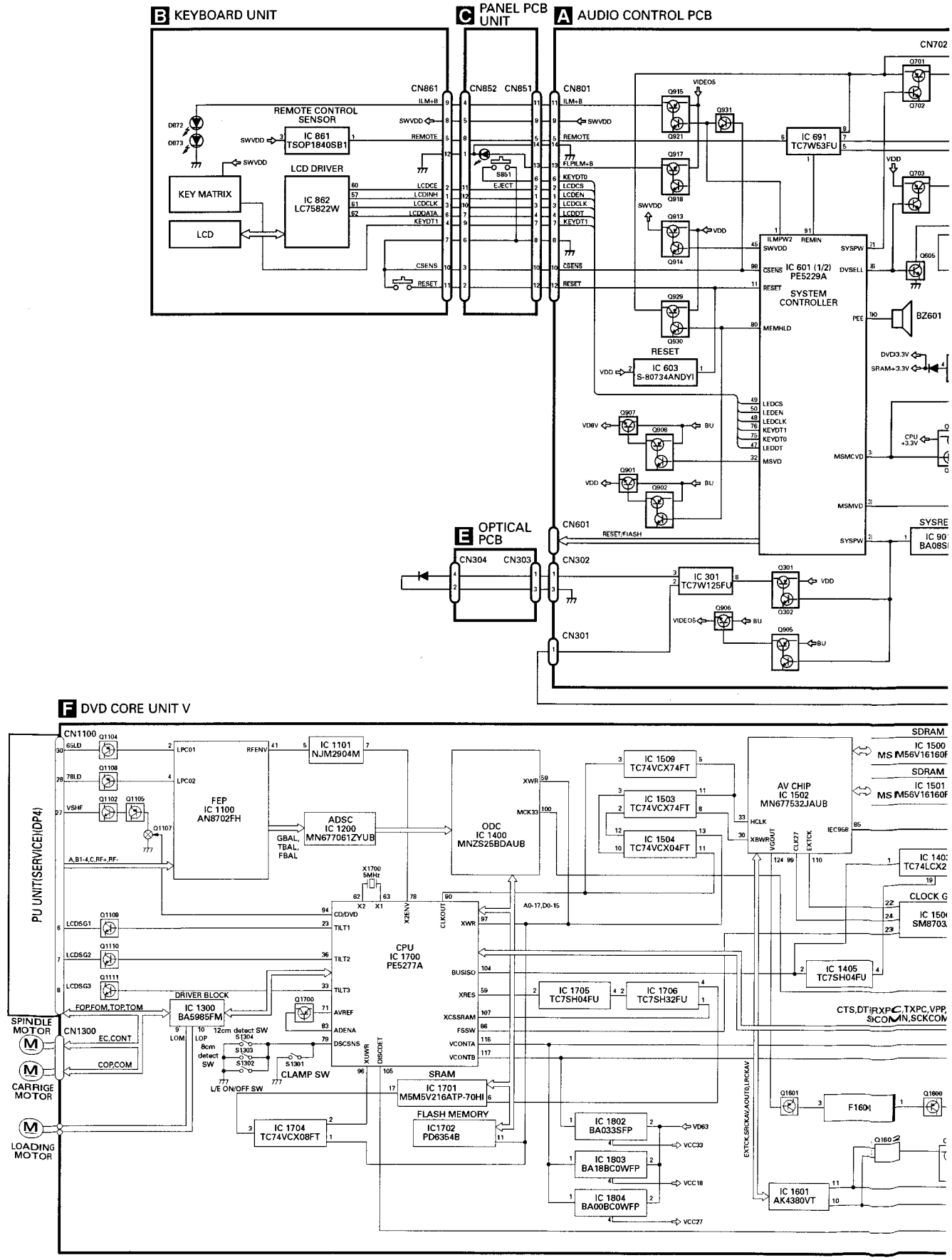


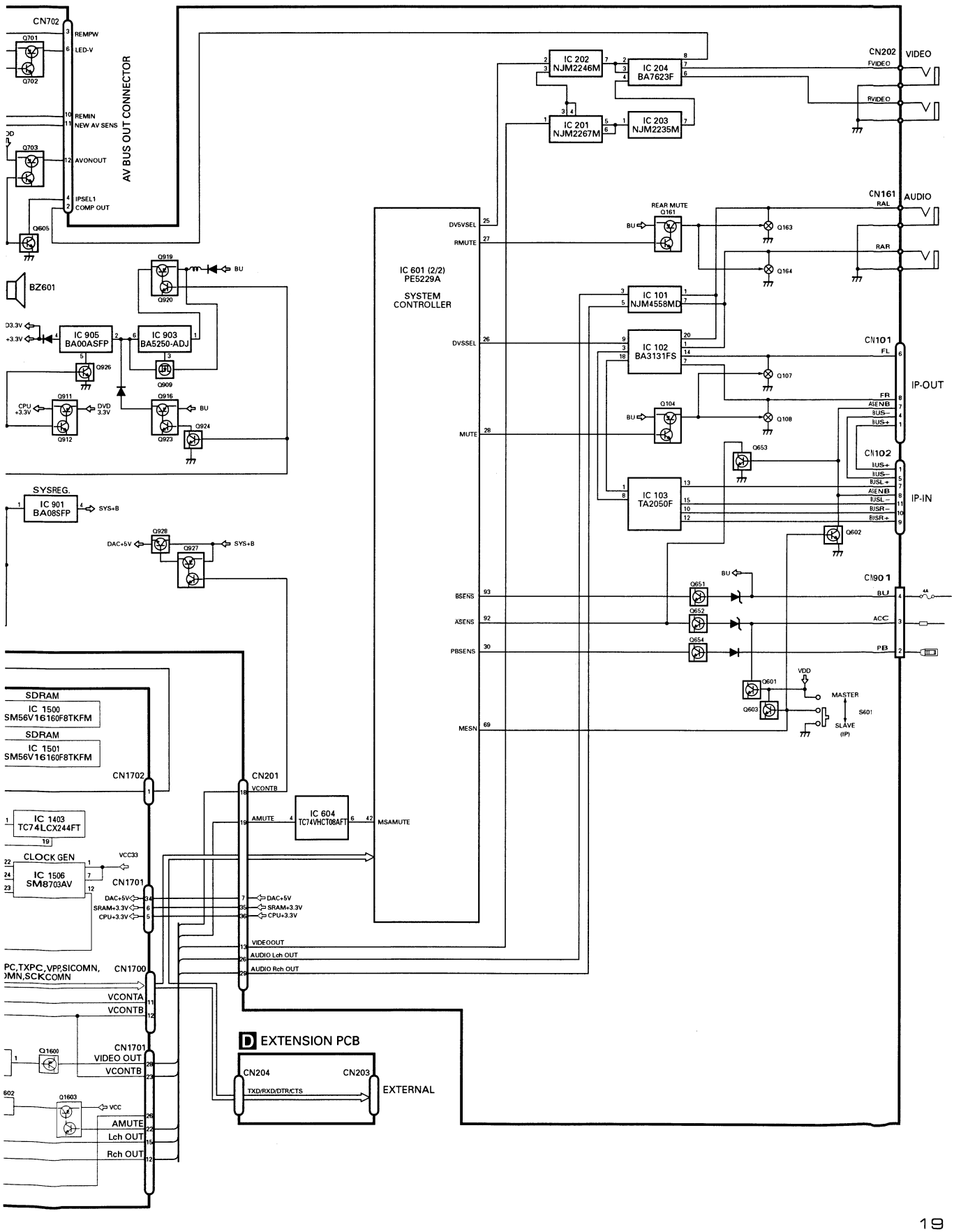
● DVD MECHANISM MODULE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	DVD core unit V	CWX2574
	2	Terminal(CN1703)	CKF1065
	3	Terminal(CN1705)	CKF1065
	4	Terminal(CN1706)	CKF1065
	5	Connector(CN1100)	CKS3749
	6	Connector(CN1701)	CKS4052
	7	Connector(CN1700)	CKS4374
	8	Connector(CN1300)	CKS4507
	9	Screw(M2x3)	CBA1486
	10	Screw	CBA1535
	11	Screw(M2x2.2)	CBA1547
	12	Screw(M2x2.2)	CBA1548
	13	Screw(M1.4x2)	CBA1549
	14	Damper	CNV6927
	15	Washer	CBF1038
	16	Spring	CBH2394
	17	Spring	CBH2395
	18	Spring	CBH2396
	19	Spring	CBH2397
	20	Spring	CBH2398
	21	Spring	CBH2399
	22	Spring	CBH2400
	23	Spring	CBH2401
	24	Spring	CBH2402
	25	Spring	CBH2403
	26	Spring	CBH2404
	27	Spring	CBH2405
	28	Spring	CBH2406
	29	Spring	CBH2407
	30	Spring	CBH2408
	31	Spring	CBH2410
	32	Spring	CBH2411
	33	Spring	CBH2413
	34	Spring	CBH2414
	35	Spring	CBL1499
	36	Spring	CBL1500
	37	Sheet	CNM7590
	38	Pickup Unit(Service)(DP4)	CXX1530
	39	Shaft	CLA3878
	40	Shaft	CLA3879
	41	Shaft	CLA3881
	42	Lever	CNC8988
	43	Bracket	CNC8992
	44	Arm	CNC8994
	45	Sheet	CNM6883
	46	Sheet	CNM6884
	47	PCB	CNP5971
	48	Ball	CNR1189
	49	Guide	CNV6352
	50	Guide	CNV6353
	51	Guide	CNV6354
	52	Guide	CNV6355
	53	Guide	CNV6356
	54	Clamper	CNV6357
	55	Arm	CNV6358
	56	Gear	CNV6361
	57	Gear	CNV6362
	58-61	•••••	
	62	Rack	CNV6367
	63	Damper	CNV6368
	64	Arm	CNV6369
	65	Arm	CNV6370
	66	Gear	CNV6372
	67	Holder	CNV6374
	68	Rack	CNV6376
	69	Arm	CNV6377
	70	Arm	CNV6378
	71	Arm	CNV6379
	72	Gear Unit	CXB5959
	73	Holder	CNV6383
	74	Guide	CNV6384
	75	Holder	CNV6385
	76	Lever Unit	CXB5943
	77	Holder Unit	CXB5944
*	78	Holder Unit	CXB5947
	79	Frame Unit	CXB5948
	80	Frame Unit	CXB5949
	81	Arm Unit	CXB5950
	82	Arm Unit	CXB5951
	83	Arm Unit	CXB5952
	84	Chassis Unit	CXB5953
	85	Arm Unit	CXB5954
	86	Motor Unit(CRG)	CXB5955
	87	Screw Unit	CXB5957
	88	Roller Unit	CXB5958
	89	Washer	CBF1060
	90	Spring	CBH2170
	91	Roller	CNV6068
	92	Holder	CNV6210
	93	Washer	YE20FUC
	94	Motor Unit(LOAD)	CXB5960
	95	Motor Unit(SPDL)	CXB6218
	96	Washer	YE15FUC
	97	Screw	IMS20P030FMC
*	98	Shaft	CLA3877
*	99	Gear	CNV6359
*	100	Caller	CNV6382
*	101	Arm Unit	CXB5945
	102	Cover	CNC9532
	103	Washer	CBF1087
	104	Roller	CNV6928
	105	Shaft	CLA4091
	106	Shaft	CLA4092
	107	Guide	CNV6805
	108	Connector(CN1702)	CKS4282
	109	Screw (M2x3.5)	CBA1560
	110	Screw (M2x2.2)	CBA1419

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

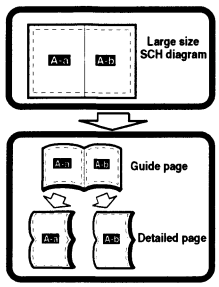
3.1 BLOCK DIAGRAM




CN702
REMPW
LED-V
AV BUS OUT CONNECTOR
REMIN
NEW AV SENS
AVONOUT
IPSEL1
COMP OUT
Q701
Q702
Q703
Q605
BZ601
Q919
Q920
BU
IC 905
BA00ASFP
IC 903
BA5250-ADJ
Q926
Q909
Q911
Q912
Q916
Q923
Q924
CPU +3.3V
DVD 3.3V
SYSREG.
IC 901
BA08SFP
SYS+B
Q928
Q927
DAC+5V
IC 202
NJM2246M
IC 204
BA7623F
IC 201
NJM2267M
IC 203
NJM2235M
CN202
VIDEO
FVIDEO
RVIDEO
IC 601 (2/2)
PE5229A
SYSTEM
CONTROLLER
DV5VSEL
RMUTE
DVSSEL
MUTE
REAR MUTE
Q161
Q163
Q164
CN161
AUDIO
RAL
RAR
IC 101
NJM4558MD
IC 102
BA3131FS
IC 103
TA2050F
Q107
Q108
Q104
Q653
Q602
CN101
FL
FR
ASENB
BUS−
BUS+
IP-OUT
CN102
BUSL+
BUSL−
BUSR−
BUSR+
IP-IN
CN901
BU
ACC
PB
BSENS
ASENS
PBSENS
MESN
Q651
Q652
Q654
Q601
Q603
VDD
MASTER
SLAVE
(IP)
S601
SDRAM
IC 1500
SM56V16160F8TKFM
SDRAM
IC 1501
SM56V16160F8TKFM
CN1702
CN201
VCONTB
IC 1403
TC74LCX244FT
IC 604
TC74VHCT08AFT
AMUTE
MSAMUTE
CLOCK GEN
IC 1506
SM8703AV
VCC33
CN1701
DAC+5V
SRAM+3.3V
CPU+3.3V
VIDEOOUT
AUDIO Lch OUT
AUDIO Rch OUT
CN1700
VCONTA
VCONTB
Q1600
CN1701
VIDEO OUT
VCONTB
Q1603
VCC
AMUTE
Lch OUT
Rch OUT
D EXTENSION PCB
CN204
CN203
TXD/RXD/DTR/CTS
EXTERNAL

3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



A-a

A AUDIO CONTROL PCB

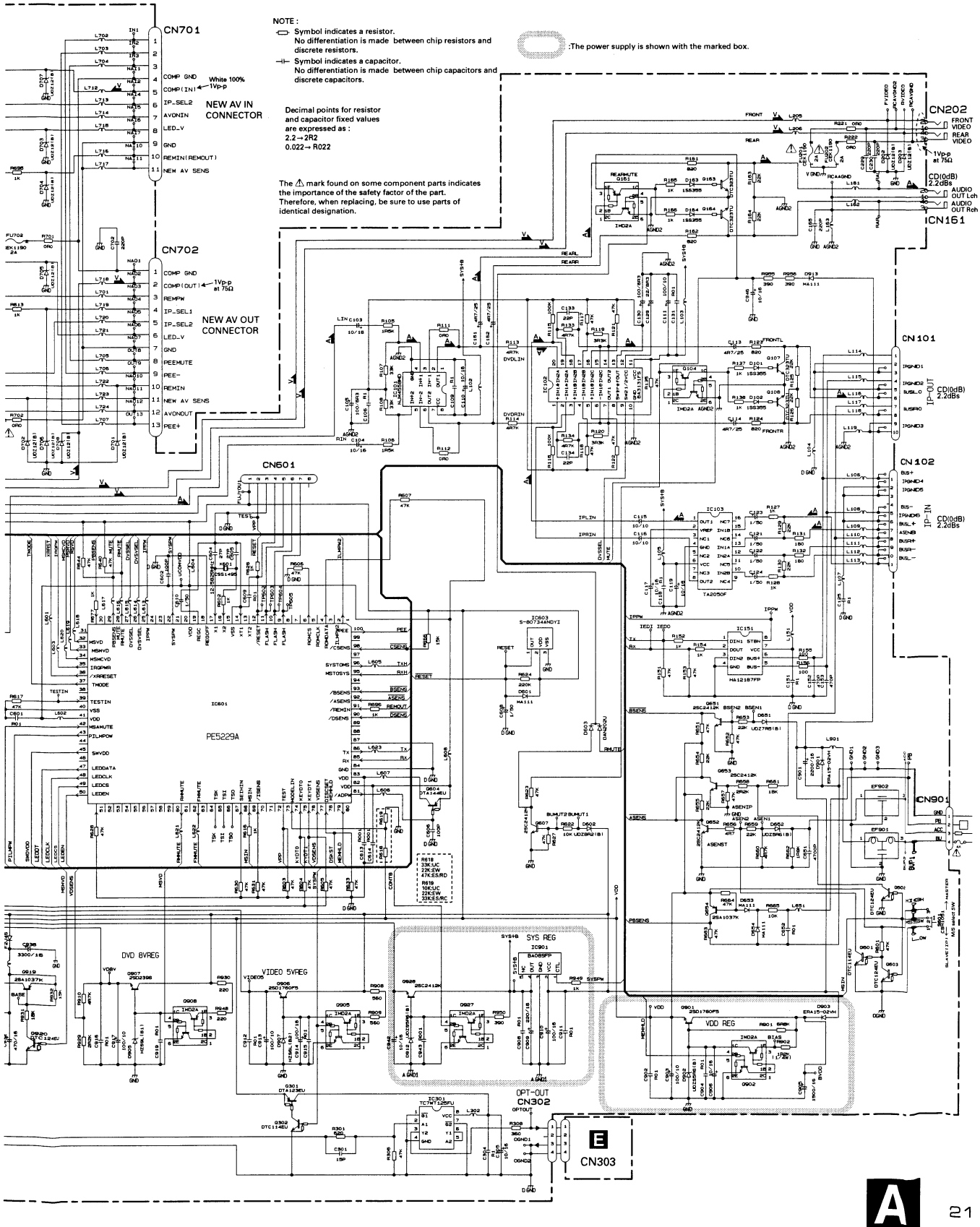
Audio Control Unit
Consists of
Audio Control PCB
Extension PCB
Optical PCB

VIDEO LINE
AUDIO LINE

CN851
CN801
CN1701
CN201
CN1702
CN301

F 2/2

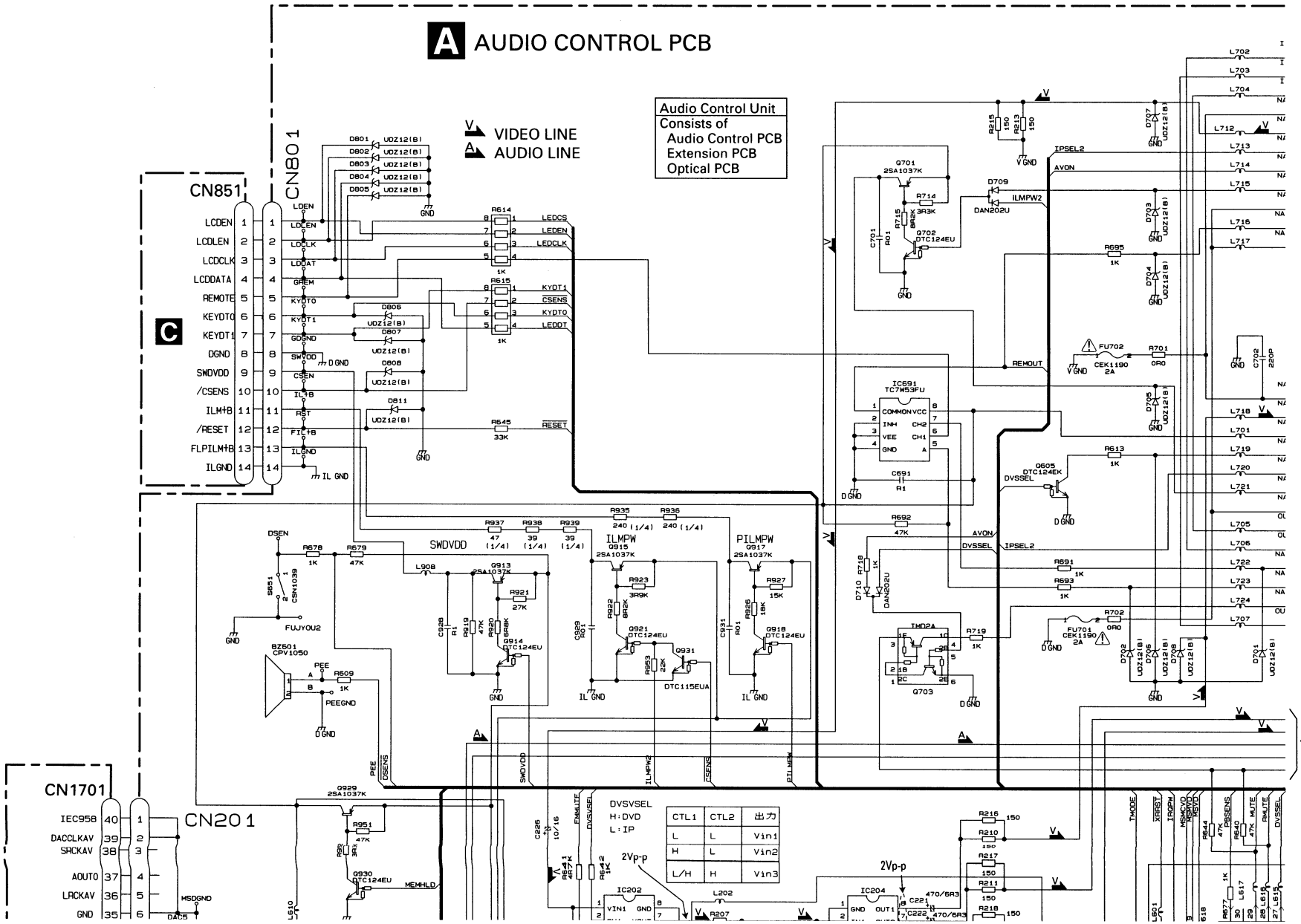
A-b


CN701
COMP GND
COMP(IN)
IP_SEL2
AVONIN
LED_V
GND
REMIN(REMOUT)
NEW AV SENS
White 100%
1Vp-p
NEW AV IN CONNECTOR
CN702
COMP GND
COMP(OUT)
REMPW
IP_SEL1
IP_SEL2
LED_V
GND
PEEMUTE
PEE-
REMIN
NEW AV SENS
AVONOUT
PEE+
1Vp-p at 75Ω
NEW AV OUT CONNECTOR
NOTE :
Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.
:The power supply is shown with the marked box.
Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
CN202
FRONT VIDEO
REAR VIDEO
1Vp-p at 75Ω
CD(0dB) 2.2dBs
AUDIO OUT Lch
AUDIO OUT Rch
CN161
CN101
CN102
IP-OUT
IP-IN
CD(0dB) 2.2dBs
CN601
IC801
PE5229A
IC803
S-80734ANDYI
IC151
HA12187FP
TA2050F
CN901
CN303
OPT-OUT
CN302
DVD 8VREG
VIDEO 5VREG
SYS REG
VDD REG
IC901
BA08SFP
IC301
TC7MT125FU

A AUDIO CONTROL PCB

Audio Control Unit
Consists of
Audio Control PCB
Extension PCB
Optical PCB

V VIDEO LINE
A AUDIO LINE



AOUTO
LRCKAV
GND
DAC+5V(CCON)
EMPH
VD
VD
PGND
PGND
VIDEO OUT
VIDEO GND
DISCDET
BUSDIR
DISCSET
CONTB(BMUTE)
AMUTE
EJSNS
TMODE
SLVSTS
HSTCMD
IRQPWR
XRESET
AUDIO Lch OUT
AGND
AGND
AUDIO Rch OUT
GND
GND
GND
GND
GND
SRAM+3.3V
CPU+3.3V
V+6.3V
V+6.3V
V+6.3V
V+6.3V
White 100%
0.5Vp-p
CD(0dB)
3.2dBs
F2/2
CN1702
CN301
DVD 3.3V/0.5A
DVD 5.0V/2A
2Vp-p
1Vp-p
MSMCVD
MSAMUTE
PILMPW
SWDVD
LEDDT
LEDCLK
LEDCS
LEDEN
VDSENS
TESTIN
XRRESET
TMODE
IRQPWR
IC202
IC204
IC201
IC203
IC905
IC903
NJM2246M
BA7623F
NJM2267M
NJM2235M
BA00ASFP
BP5290
A-a
A-b
SDV-P7

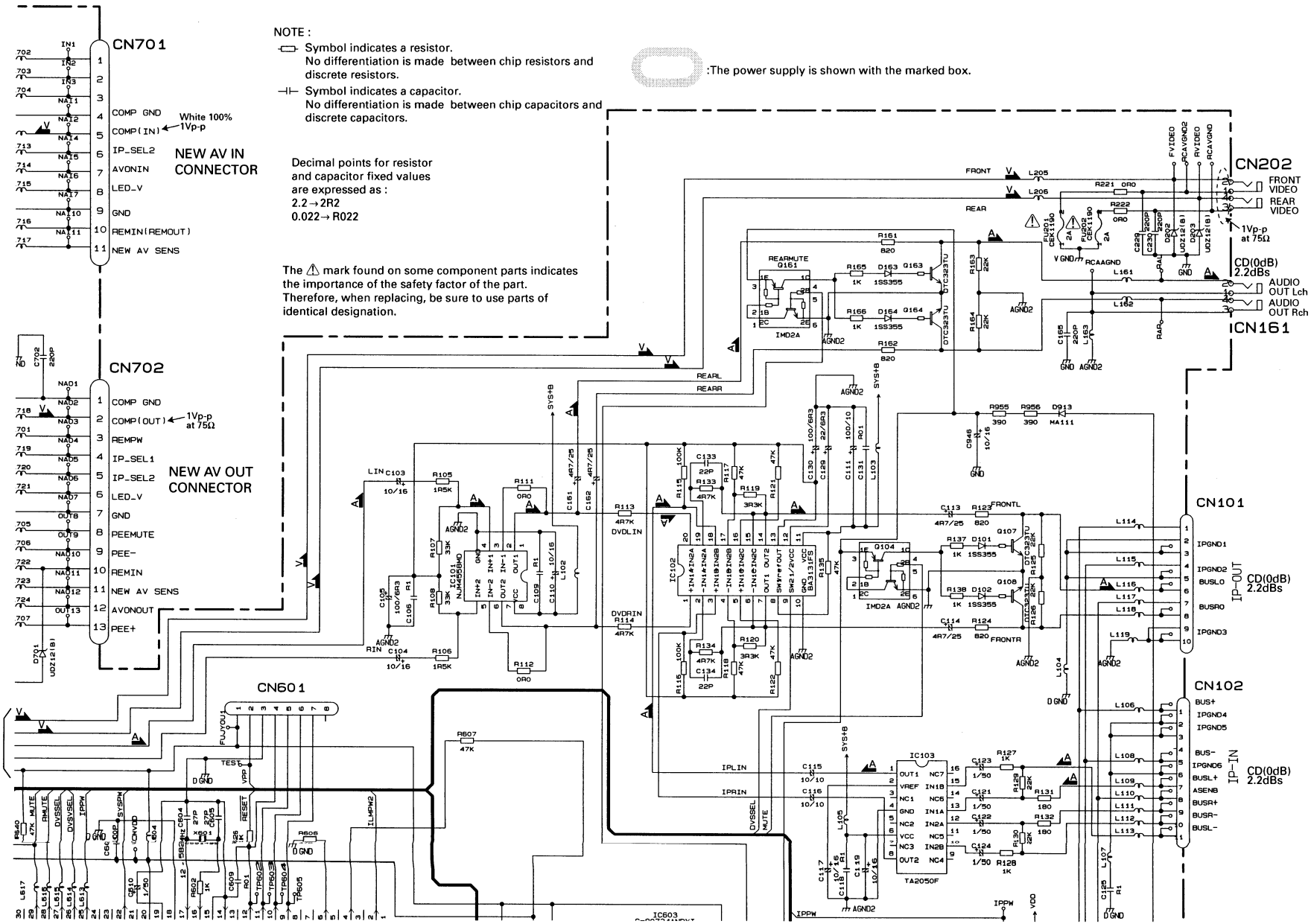
NOTE :

- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

:The power supply is shown with the marked box.

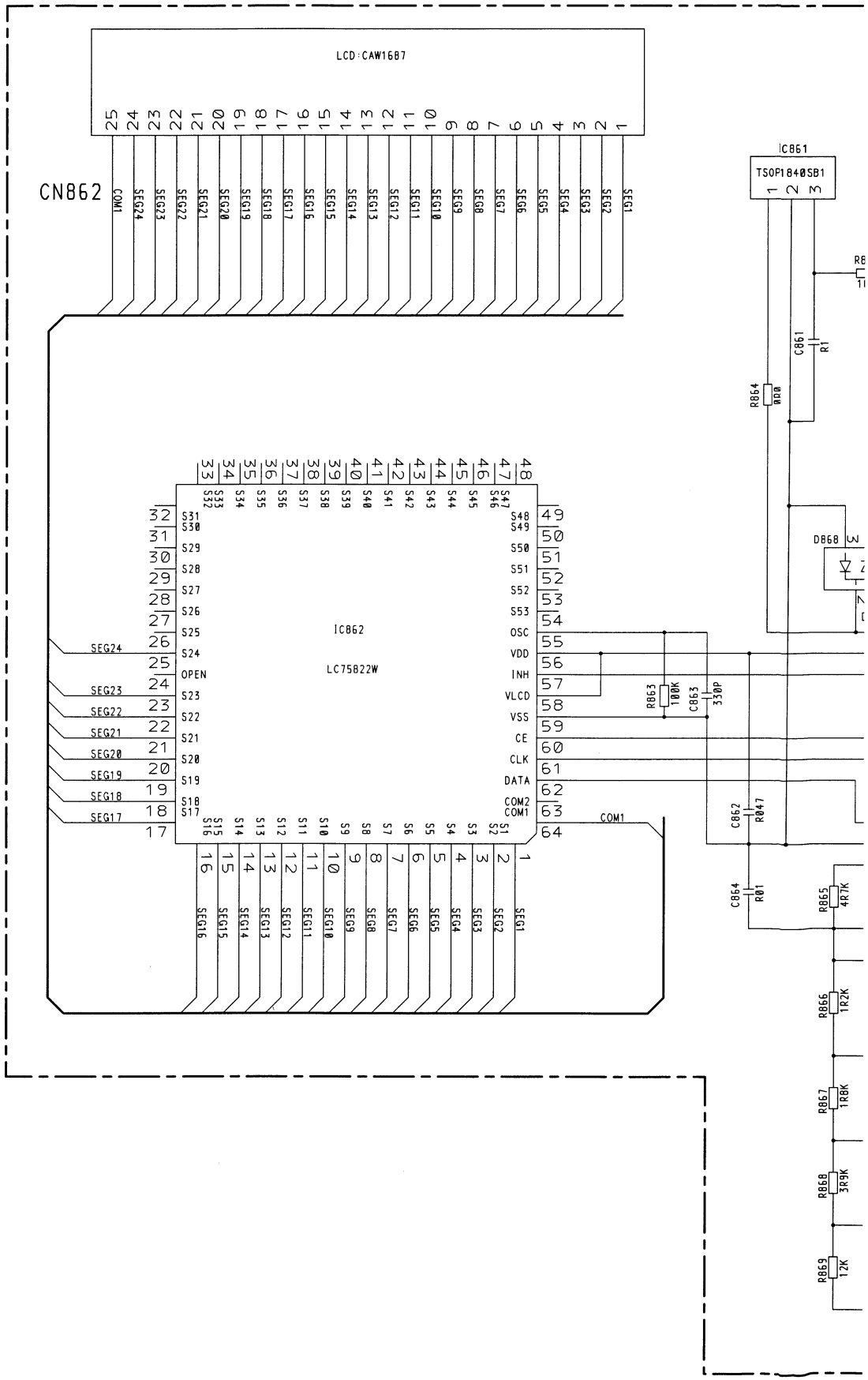
Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022

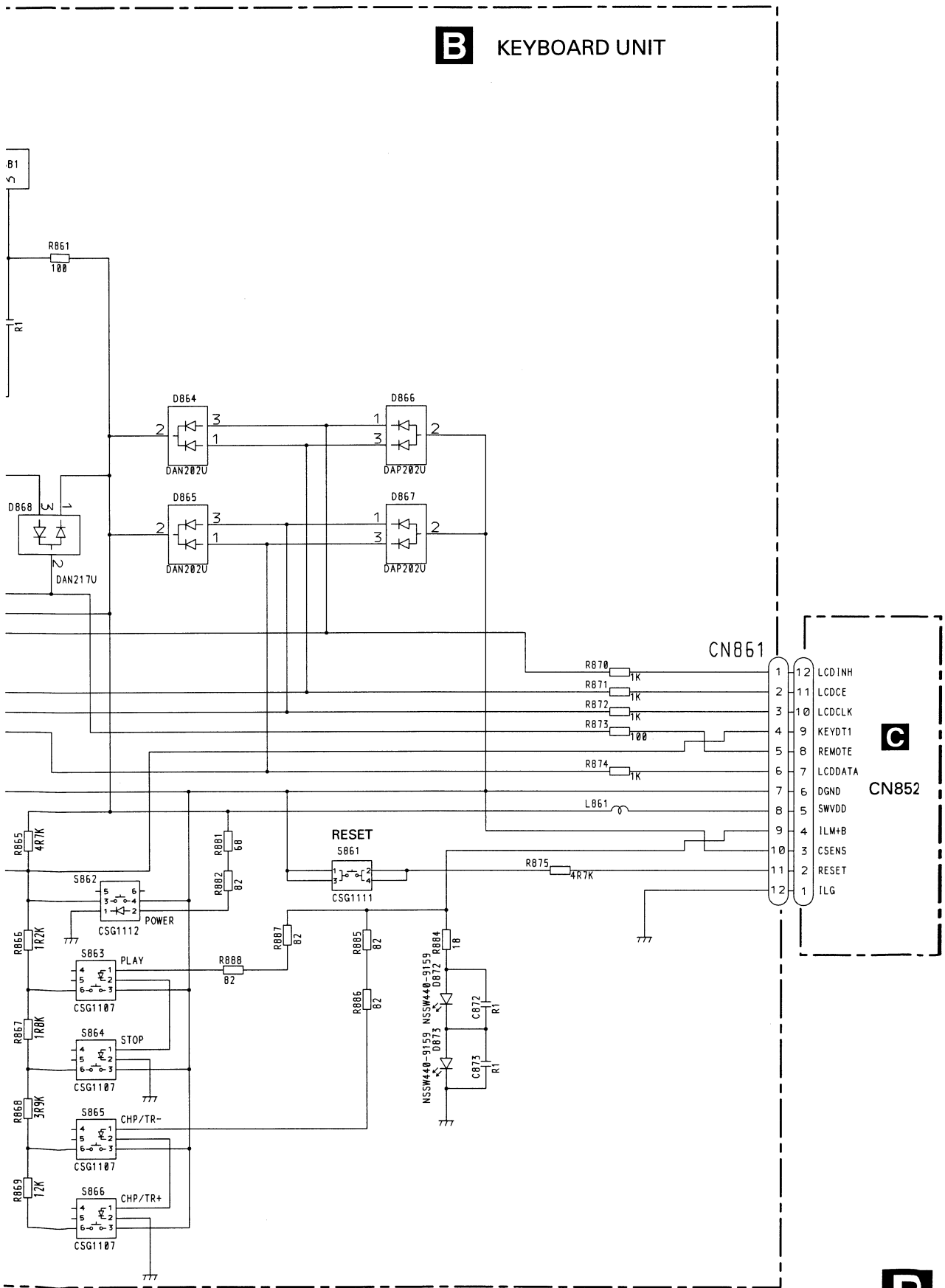
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.



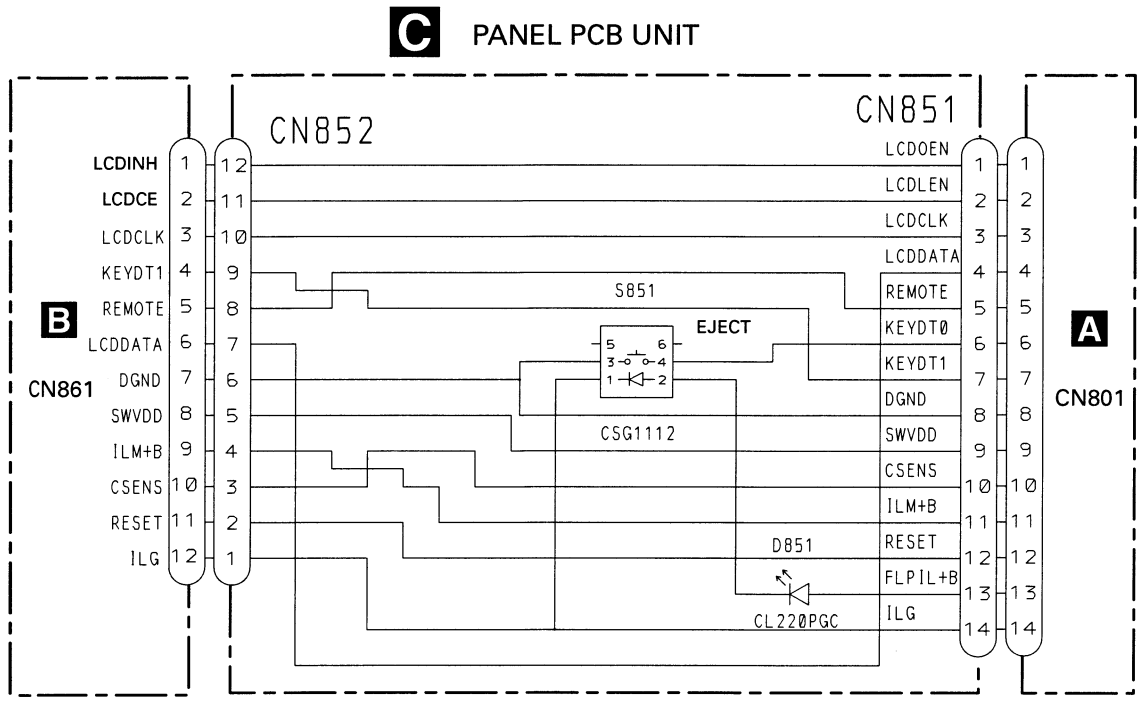
IC601
PE5229A
IC503
S-80734ANDYI
IC151
HA12187FP
TA2050F
CN901
CN302
CN303
DVD 8VREG
VIDEO 5VREG
SYS REG
VDD REG
OPT-OUT
IC901
BA08SFP
IC301
TC7WT125FU
SLAVE(IP) → MASTER
M/S select SW
A-a
A-b

3.3 KEYBOARD UNIT

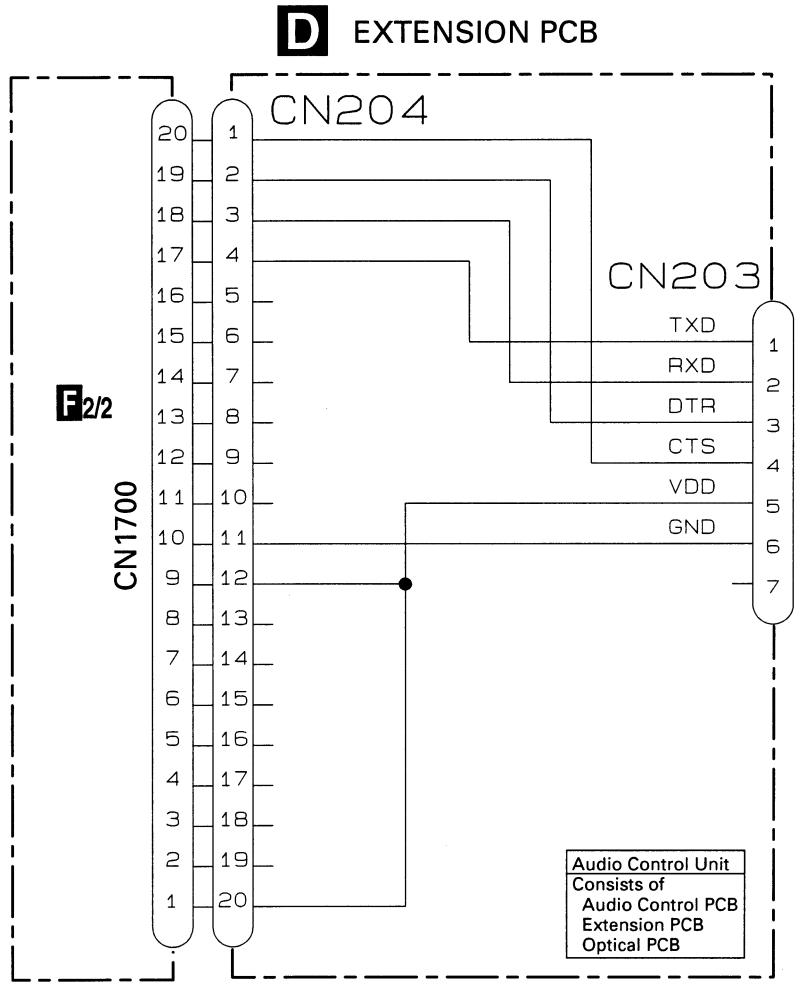



B KEYBOARD UNIT
R861
100
R1
D864
D866
D865
D867
D868
DAN202U
DAP202U
DAN217U
CN861
R870 1K
R871 1K
R872 1K
R873 100
R874 1K
L861 0
R875 4R7K
RESET
S861
CSG1111
R865 4R7K
R866 1R2K
R867 1R8K
R868 3R9K
R869 12K
R881 68
R882 82
R887 82
R888 82
R885 82
R886 82
R884 18
S862
CSG1112
POWER
S863
PLAY
S864
STOP
S865
CHP/TR-
S866
CHP/TR+
CSG1107
NSSW440-9159
D872
D873
C872 R1
C873 R1
1 LCDINH
2 LCDCE
3 LCDCLK
4 KEYDT1
5 REMOTE
6 LCDDATA
7 DGND
8 SWVDD
9 ILM+B
10 CSENS
11 RESET
12 ILG
C
CN852

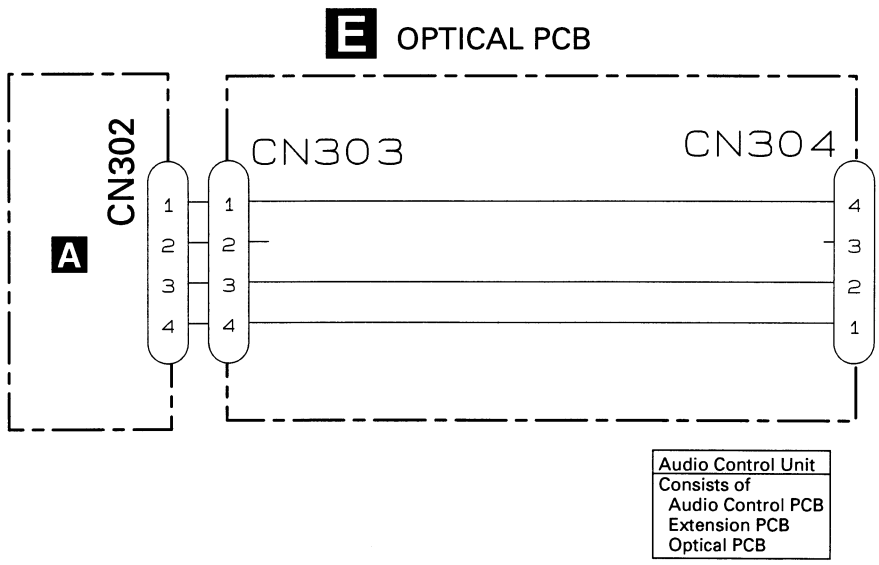
3.4 PANEL PCB UNIT



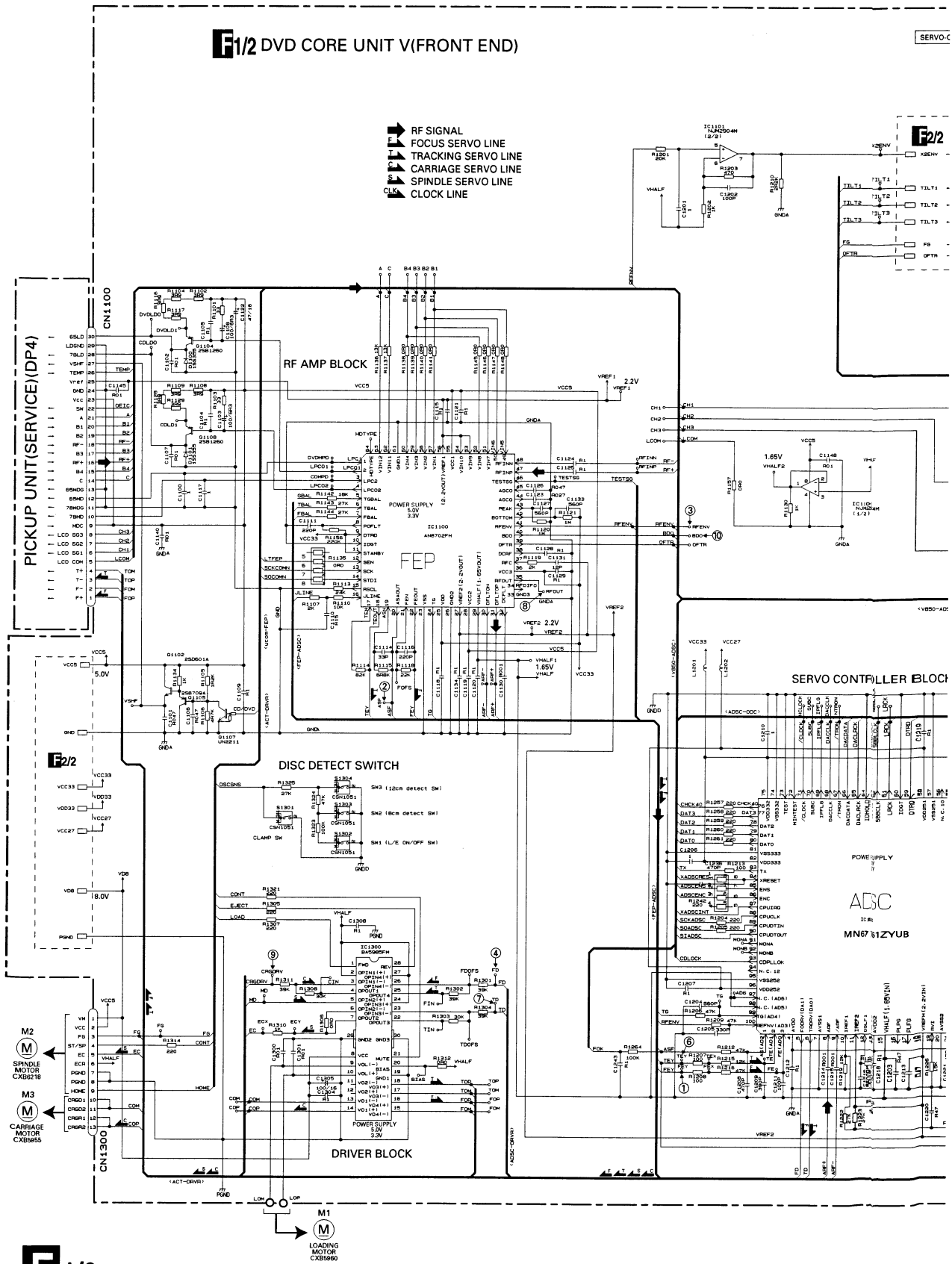
3.5 EXTENSION PCB



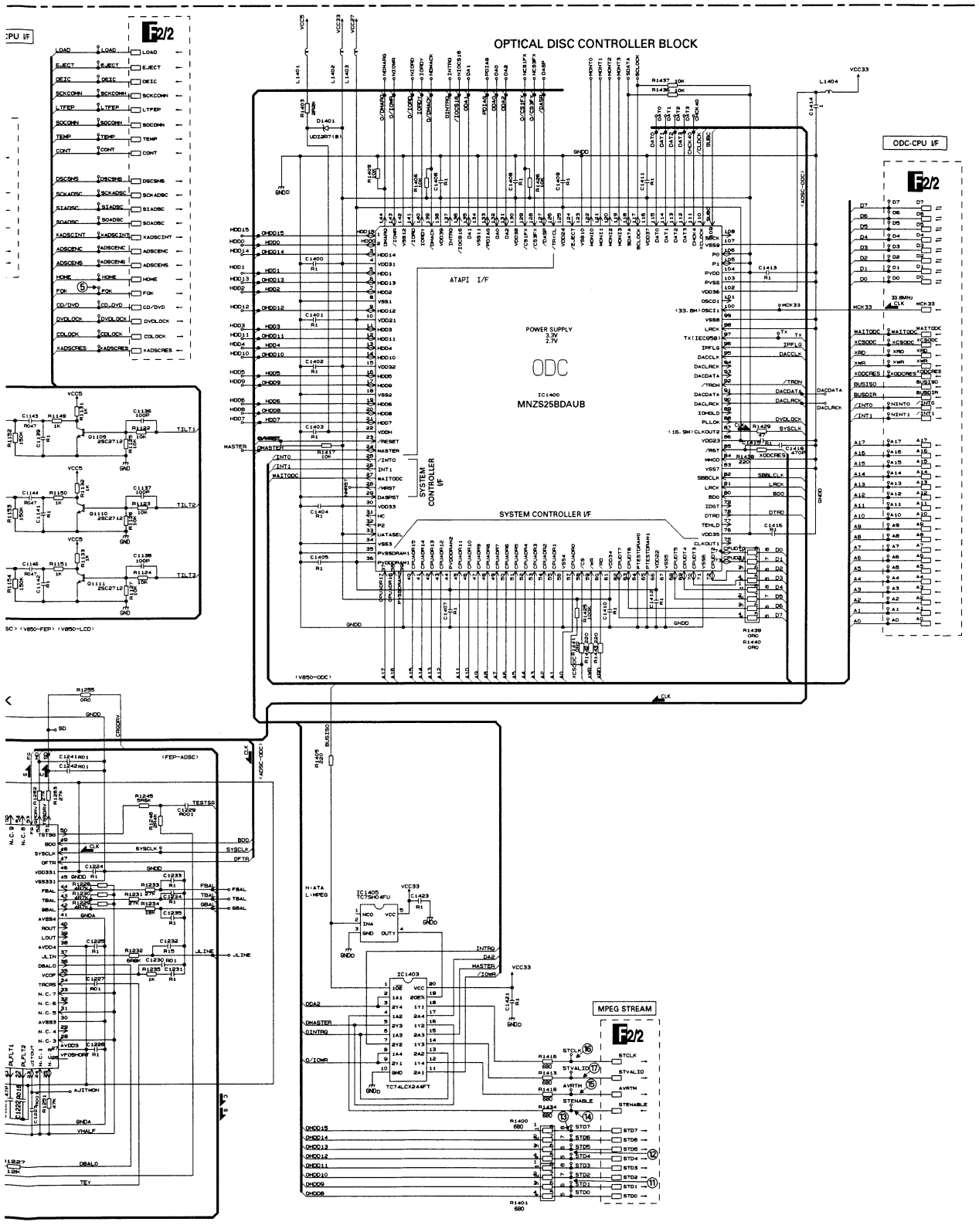
3.6 OPTICAL PCB



3.7 DVD MECHANISM MODULE(1/2)(GUIDE PAGE) F-a 1/2



F-b 1/2


OPTICAL DISC CONTROLLER BLOCK
ATAPI I/F
POWER SUPPLY
3.3V
2.7V
ODC
IC1400
MNZS25BDAUB
SYSTEM CONTROLLER I/F
SYSTEM CONTROLLER I/F
ODC-CPU I/F
MPEG STREAM
F2/2
F2/2
F2/2
(FEP-ADSC)
(V850-ODC)
(V850-FEP) (V850-LCD)

F-a (1/2) F-b (1/2)

F1/2 DVD CORE UNIT V(FRONT END)

SERVO-CPU I/F

RF SIGNAL
F FOCUS SERVO LINE
T TRACKING SERVO LINE
C CARRIAGE SERVO LINE
S SPINDLE SERVO LINE
CLK CLOCK LINE

PICKUP UNIT(SERVICE)(DP4)

CN1100

RF AMP BLOCK

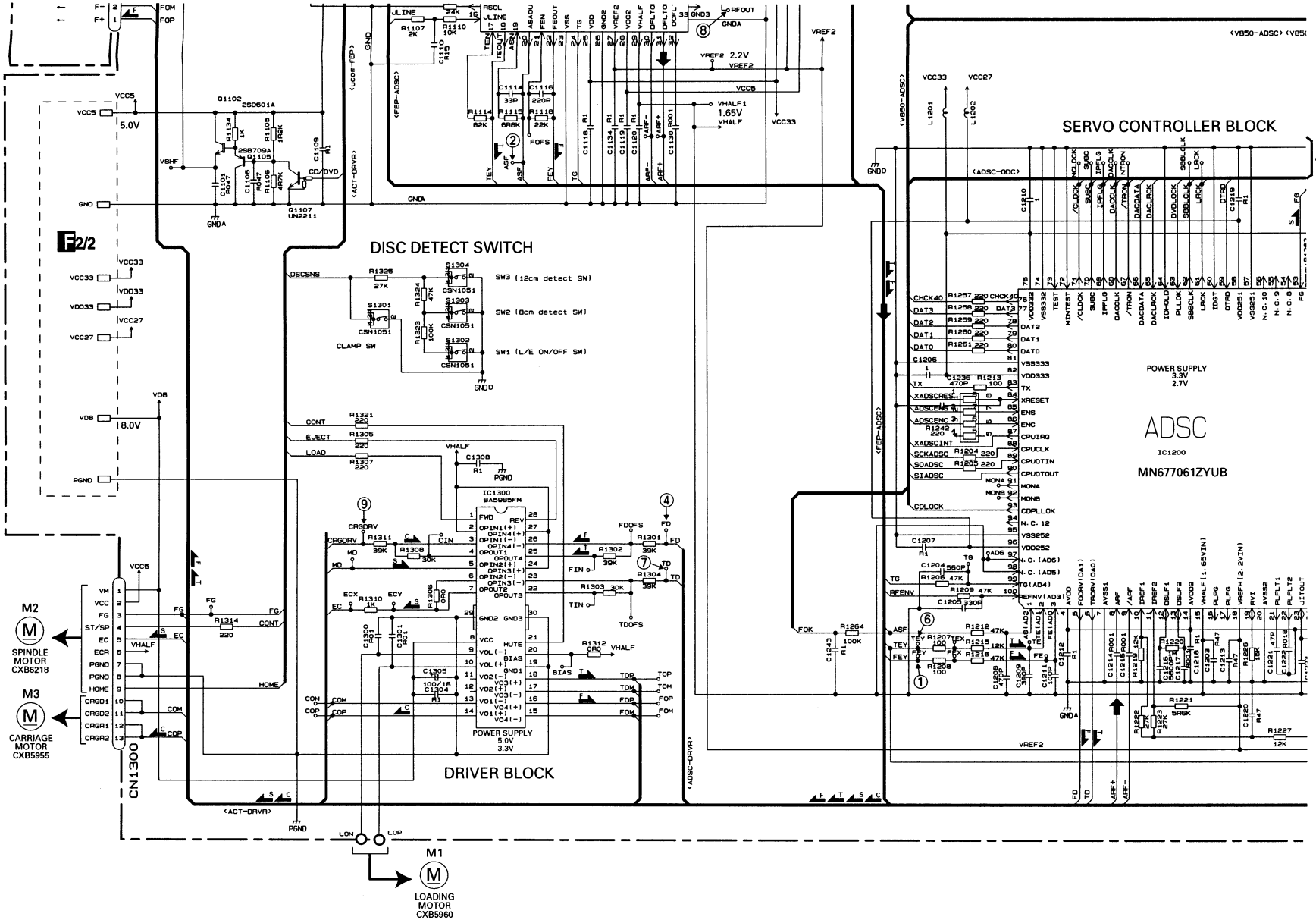
IC1100 AN8702FH

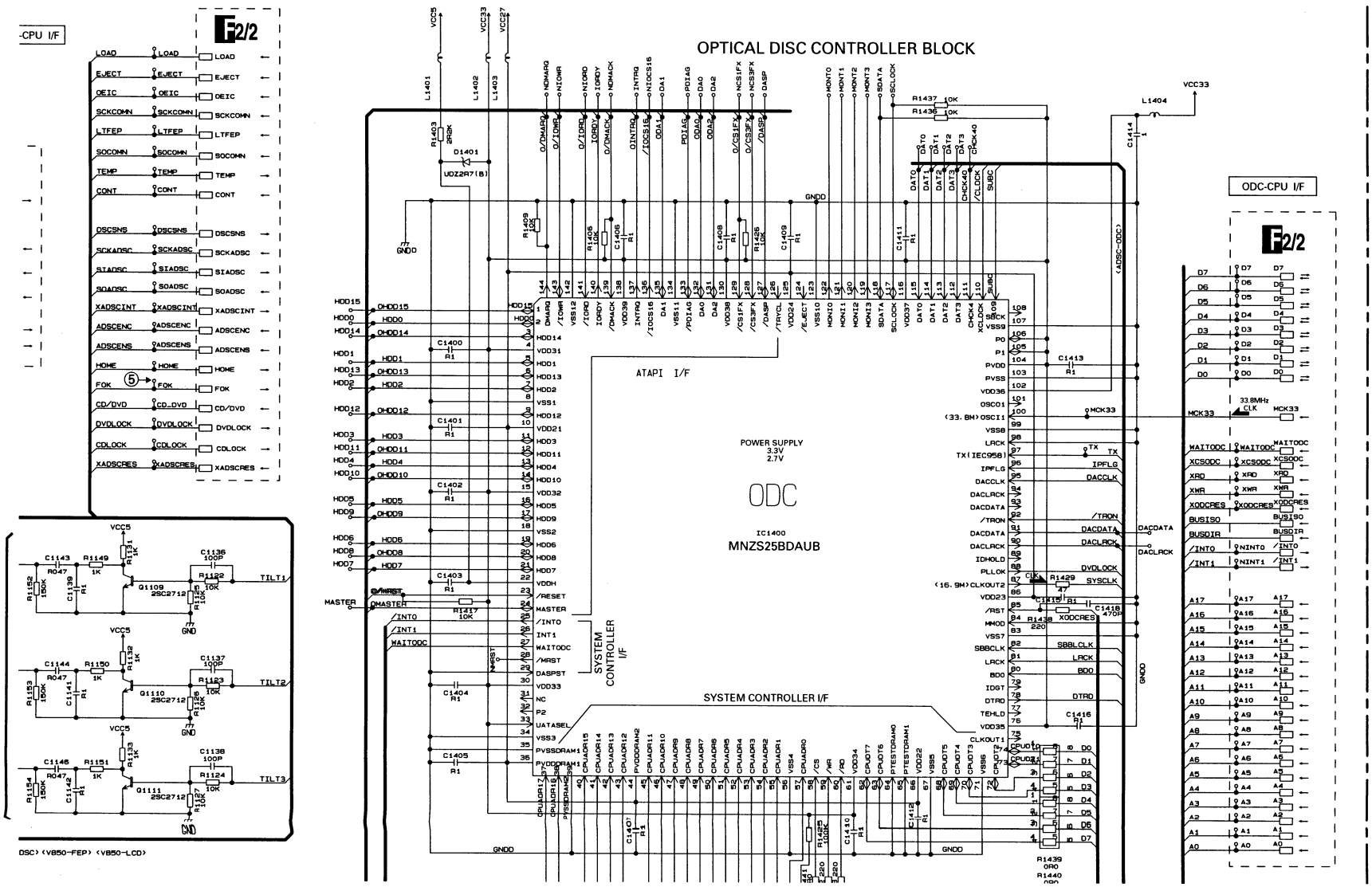
POWER SUPPLY 5.0V 3.3V

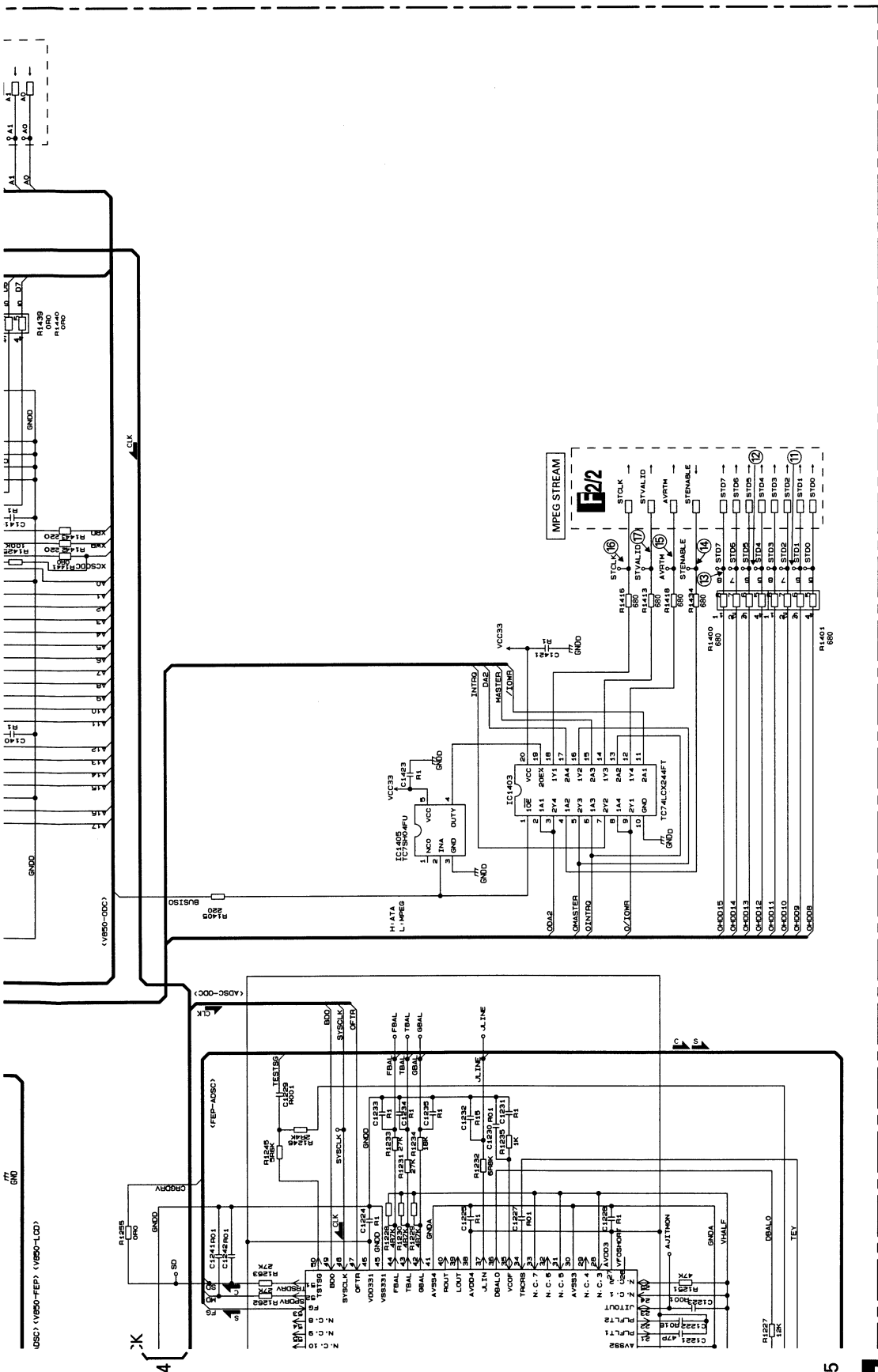
IC1101 NJM2904M (2/2)

IC1101 NJM2904M (1/2)

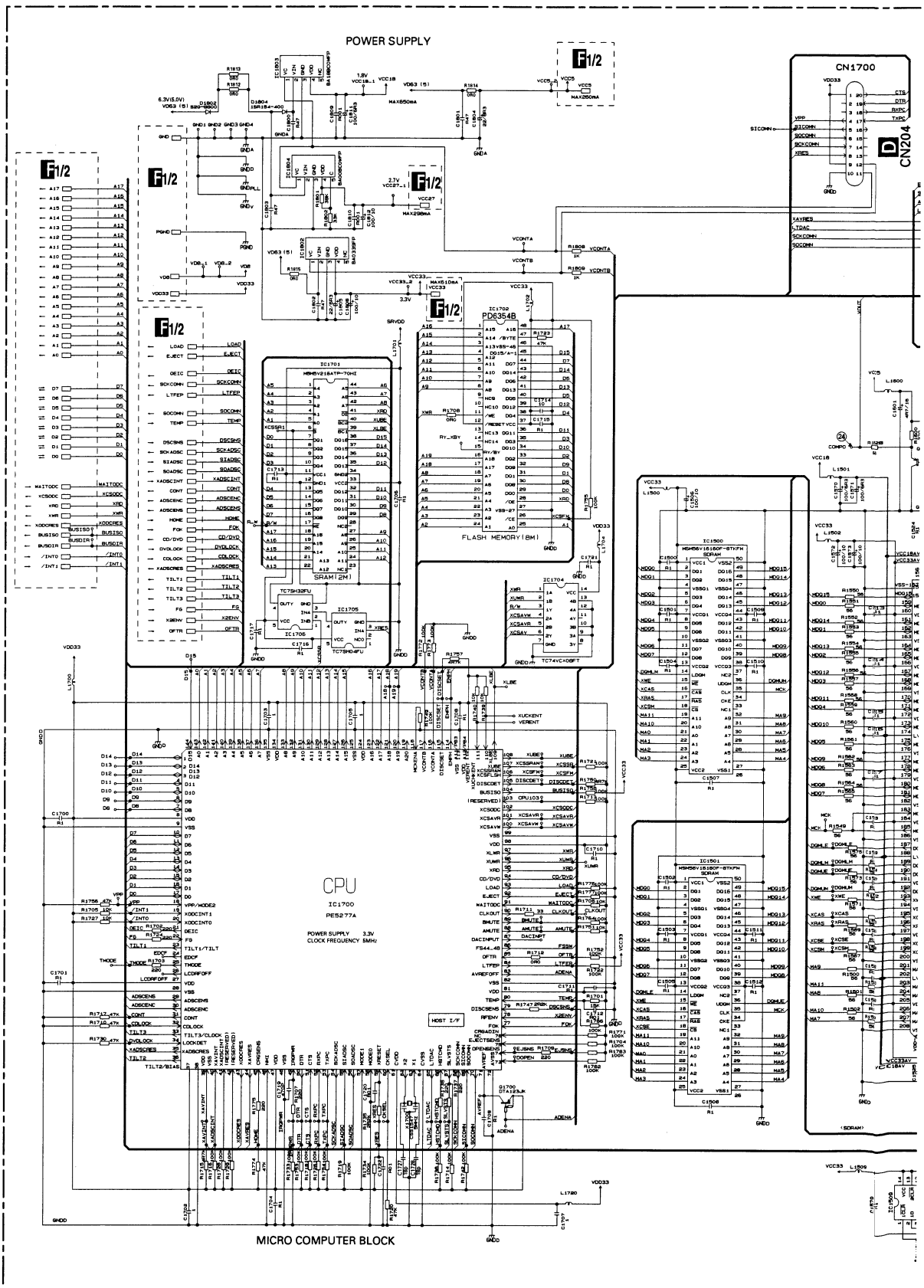
F2/2


SERVO CONTROLLER BLOCK
DISC DETECT SWITCH
DRIVER BLOCK
ADSC
IC1200
MN677061ZYUB
POWER SUPPLY
3.3V
2.7V
SW3 (12cm detect SW)
SW2 (8cm detect SW)
SW1 (L/E ON/OFF SW)
CLAMP SW
SPINDLE MOTOR CXB6218
CARRIAGE MOTOR CXB5955
LOADING MOTOR CXB5960
CN1300
F2/2
5.0V
8.0V
VHALF1 1.65V
VREF2 2.2V
F-a 1/2
F-a (1/2) F-b (1/2)
SDV-P7
33

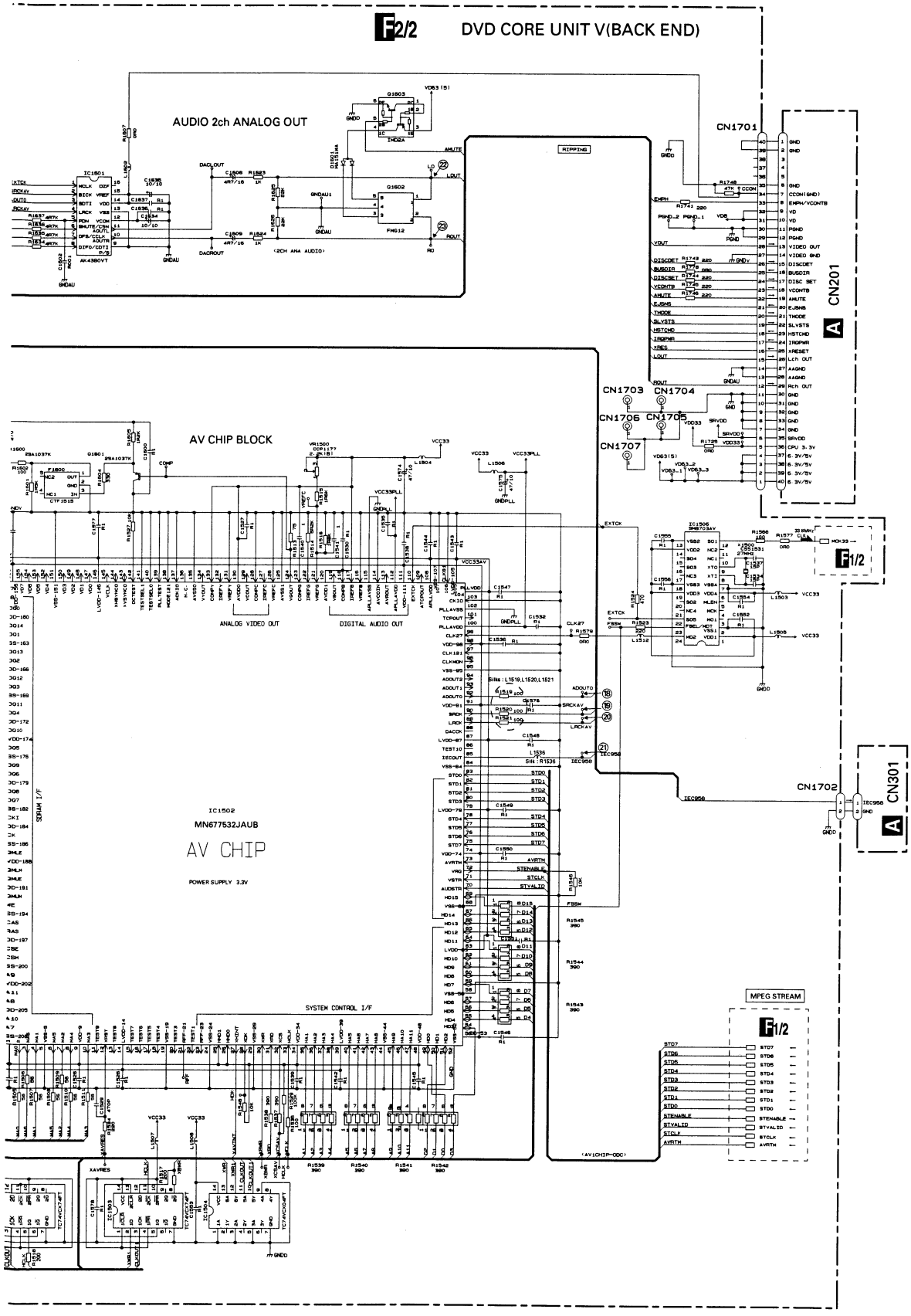

OPTICAL DISC CONTROLLER BLOCK
ATAPI I/F
POWER SUPPLY
3.3V
2.7V
ODC
IC1400
MNZS25BDAUB
SYSTEM CONTROLLER I/F
SYSTEM CONTROLLER I/F
ODC-CPU I/F
-CPU I/F
F2/2
F2/2
LOAD
EJECT
OEIC
SCKCOMN
LTFEP
SOCOMN
TEMP
CONT
DSCSNS
SCKADSC
SIADSC
SOADSC
XADSCINT
ADSCENC
ADSCENS
HOME
FOK
CD/DVD
DVDLOCK
CDLOCK
XADSCRES
MASTER
TILT1
TILT2
TILT3
GND
VCC5
VCC33
GNDD
MCK33
33.8MHz
DACDATA
DACLRCK
SYSCLK
XODCRES
SBBLCLK
LRCK
BDO
DTRD
DVDLOCK
IPFLG
DACCLK
WAITODC
XCSODC
XRD
XWR
BUSIOS
BUSDIR
/INT0
/INT1
/RESET
/MRST
/TRON
TX
DSC> (V850-FEP) (V850-LCD)

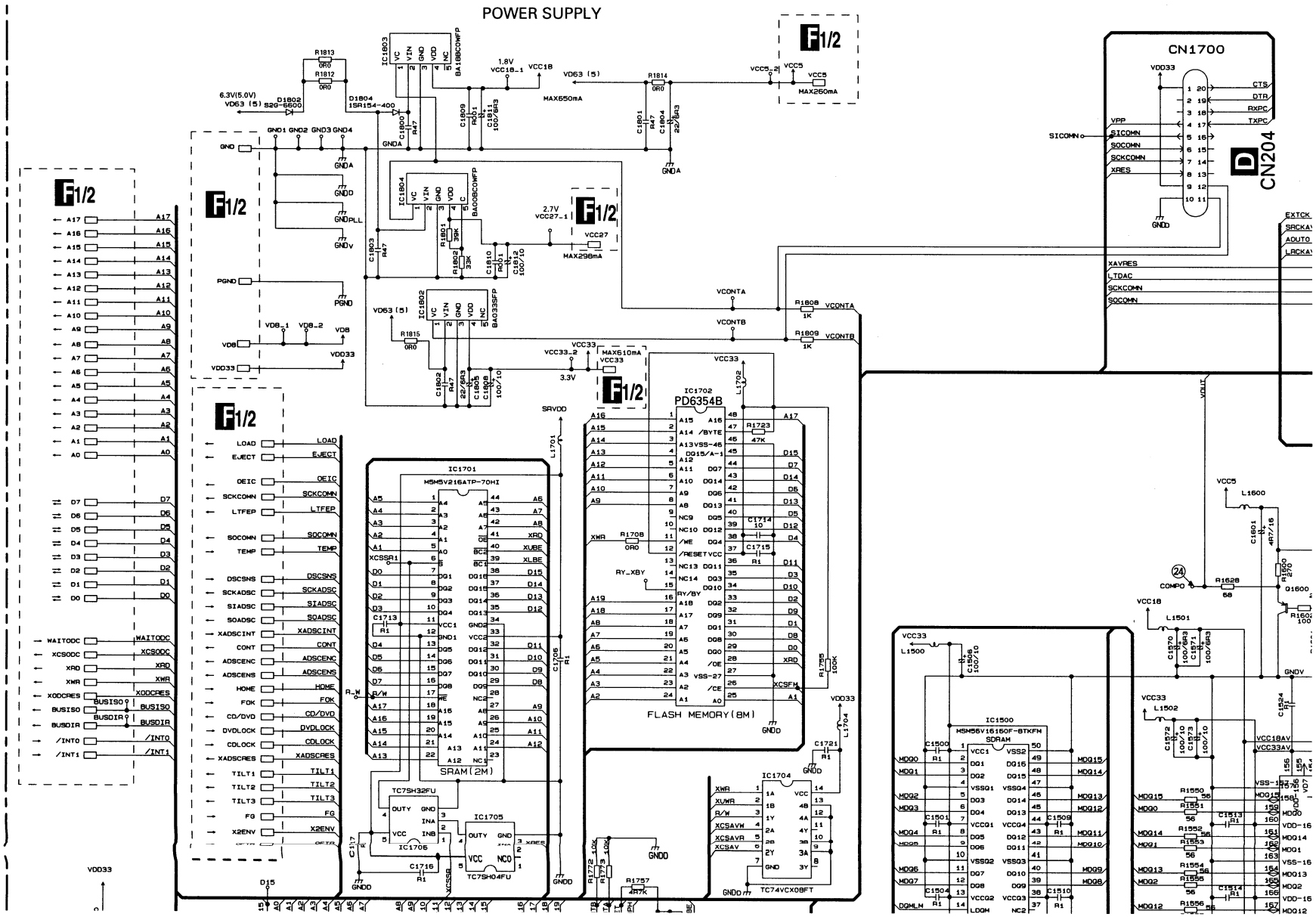

MPEG STREAM
F2/2
STCLK
STVALID
AVRTM
STENABLE
STD7
STD6
STD5
STD4
STD3
STD2
STD1
STD0
IC1403
TC74LCX244FT
IC1405
TC7SH04FU
VCC33
GNDD
INTRQ
DA2
MASTER
/IOWR
CLK
BUSISO
DATA
L-MPEG
QDA2
QMASTER
QINTRQ
Q/IOWR
QHDD15
QHDD14
QHDD13
QHDD12
QHDD11
QHDD10
QHDD9
QHDD8
(VB50-DDC)
(ADSC-DDC)
(FEP-ADSC)
(DSC) (VB50-FEP) (VB50-LCD)
SYSCLK
OFTR
FBAL
TBAL
GBAL
JLINE
TESTSG
CARDRV
SD
AVDD3
VFOSHORT
AJITMON
VHALF
DBALO
TEV
PLFLT1
PLFLT2
AVSS2
JITOUT
N.C.3
N.C.4
N.C.5
N.C.6
N.C.7
N.C.8
N.C.9
N.C.10
TRORB
VCOF
AVSS3
AVDD4
LOUT
ROUT
VSS331
VDD331
TBST99
BOD
GNDA
AVSS4
C1241
C1242
C1243
C1244
C1245
C1246
C1247
C1248
C1249
C1250
C1251
C1252
C1253
C1254
C1255
C1256
C1257
C1258
C1259
C1260
C1261
C1262
C1263
C1264
C1265
C1266
C1267
C1268
C1269
C1270
C1271
C1272
C1273
C1274
C1275
C1276
C1277
C1278
C1279
C1280

3.8 DVD MECHANISM MODULE(2/2)(GUIDE PAGE) F-a 2/2



F-b 2/2


F2/2 DVD CORE UNIT V(BACK END)
AUDIO 2ch ANALOG OUT
AV CHIP BLOCK
IC1502
MN677532JAUB
AV CHIP
POWER SUPPLY 3.3V
ANALOG VIDEO OUT
DIGITAL AUDIO OUT
SYSTEM CONTROL I/F
SDRAM I/F
MPEG STREAM
CN1701
CN201
CN1702
CN301
CN1703
CN1704
CN1705
CN1706
CN1707
F1/2
F2/2


POWER SUPPLY
F1/2
CN1700
CN204
IC1702
PD6354B
FLASH MEMORY(8M)
IC1701
M5M5V216ATP-70HI
SRAM(2M)
IC1500
MSM56V16160F-6TKFH
SDRAM
IC1704
TC74VCX08FT
IC1705
TC7SH32FU
IC1706
TC7SH04FU
IC1803
BA18BC0WFP
IC1804
BA00BC0WFP
IC1802
BA033SFP
1.8V
VCC18_1
VCC18
MAX650mA
VCC5_2
VCC5
MAX260mA
2.7V
VCC27_1
VCC27
MAX298mA
VCC33_2
VCC33
MAX610mA
3.3V
6.3V(5.0V)
VD63 (5)
D1802
S2G-6600
D1804
1SR154-400
GND
GNDA
GNDD
GNDPLL
GNDV
PGND
VD8_1
VD8_2
VD8
VDD33
VCONTA
VCONTB
SAVDD
VDDT
GNDD
VCC18AV
VCC33AV
COMPO
EXTCK
SRCKA
ADUTO
LRCKA
XAVRES
LTDAC
SCKCOMN
SOCOMN
SICOMN
VPP
CTS
DTR
RXPC
TXPC
LOAD
EJECT
OEIC
SCKCOMN
LTFEP
SOCOMN
TEMP
DSCSNS
SCKADSC
SIADSC
SOADSC
XADSCINT
CONT
ADSCENC
ADSCENS
HOME
FOK
CD/DVD
DVDLOCK
CDLOCK
XADSCRES
TILT1
TILT2
TILT3
FG
X2ENV
WAITODC
XCSODC
XRD
XWR
XODCRES
BUSISO
BUSDIR
/INT0
/INT1
XWR
XWRL
XWRU
R/W
XCSAVH
XCSAVR
XCSAV
XCSFM
XRES
XLBE
XUBE
MDQ0
MDQ1
MDQ2
MDQ3
MDQ4
MDQ5
MDQ6
MDQ7
MDQ8
MDQ9
MDQ10
MDQ11
MDQ12
MDQ13
MDQ14
MDQ15
DQMLH
DQML
VCC33
VCC5
VCC18
GNDV

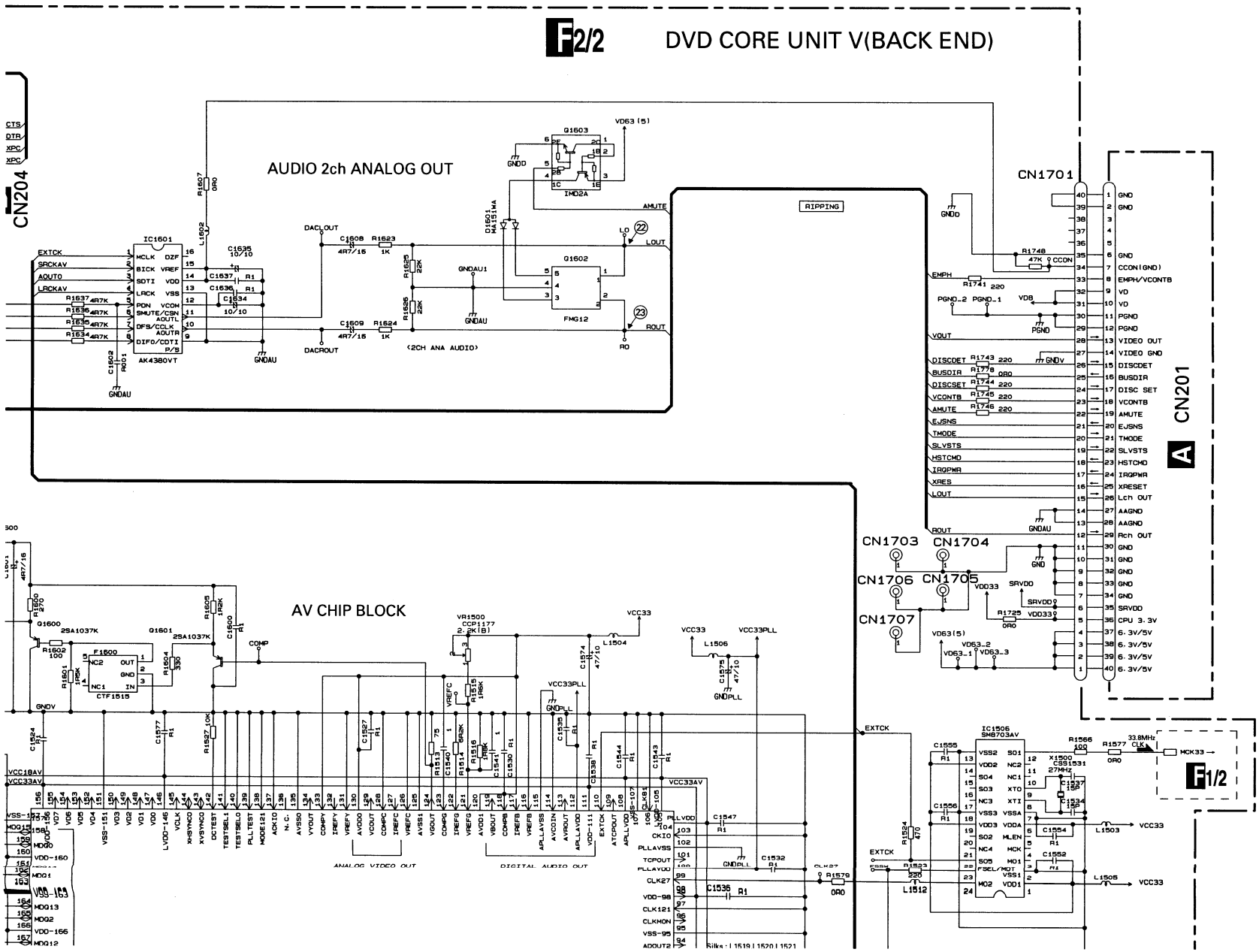
F-a (2/2) F-b (2/2)

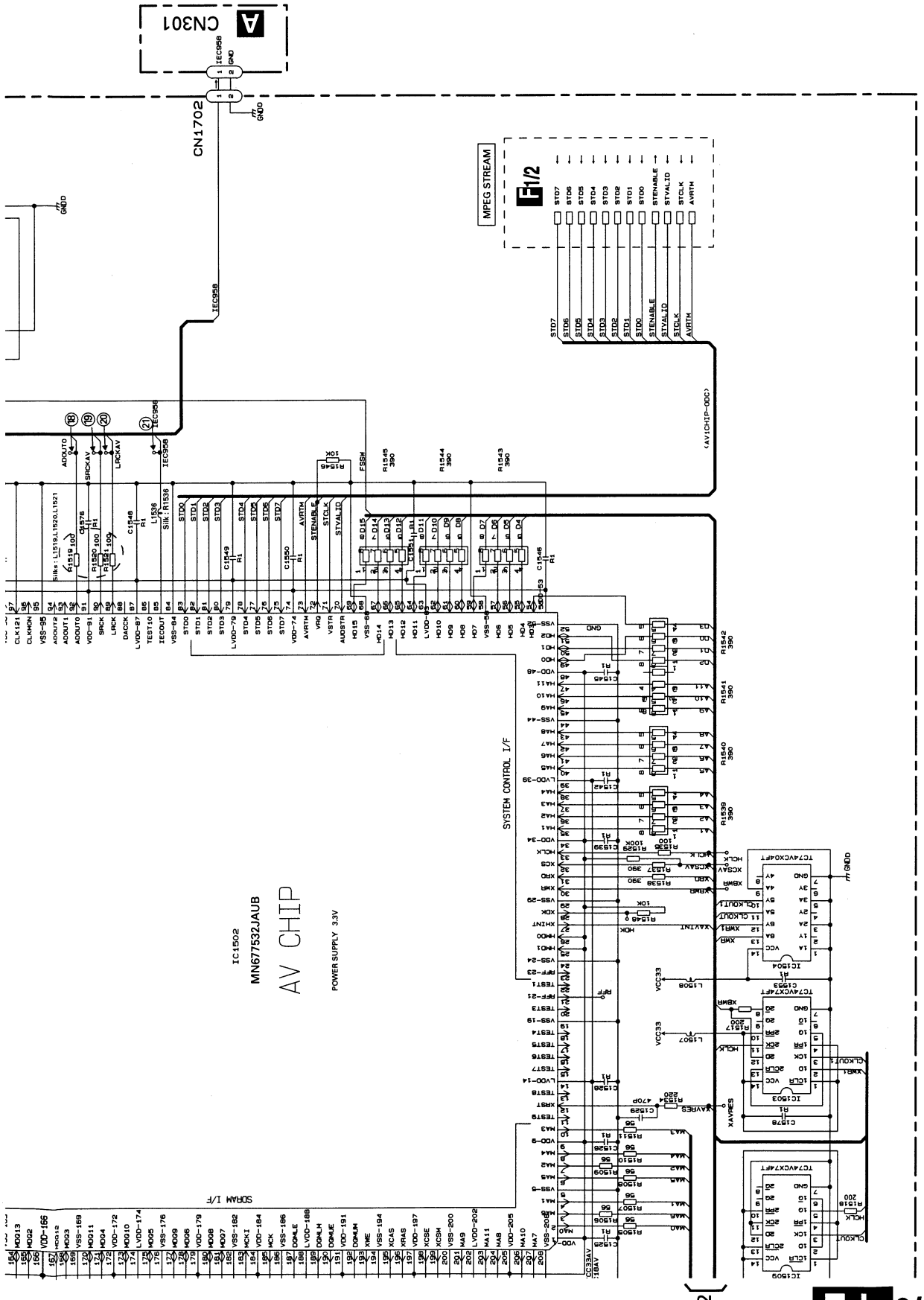
SDV-P7

F-a (2/2) F-b (2/2)

F-b 2/2

F2/2 DVD CORE UNIT V(BACK END)

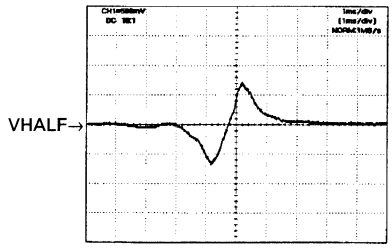



A
CN301
IEC956
GND
CN1702
MPEG STREAM
F1/2
STD7
STD6
STD5
STD4
STD3
STD2
STD1
STD0
STENABLE
STVALID
STCLK
AVRTM
(AV1CHIP-00C)
SYSTEM CONTROL I/F
IC1502
MN677532JAUB
AV CHIP
POWER SUPPLY 3.3V
SDRAM I/F
TC74VCX04FT
TC74VCX74FT
IC1503
IC1504
IC1505
IC1506
IC1507
IC1508
IC1509
2

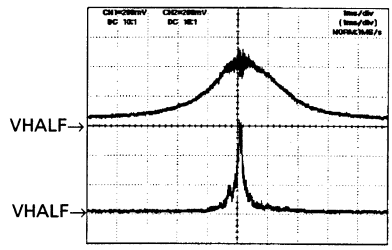
● Waveforms

Note:1. The encircled number denote measuring pointes in the circuit diagram.
2. Reference voltage VHALF : 1.65V

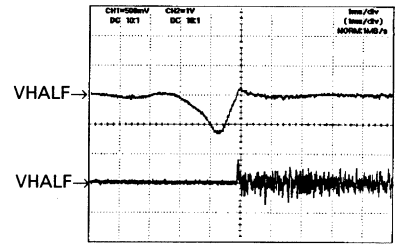
① FEY 500mV/div. 1ms/div.
Focus search



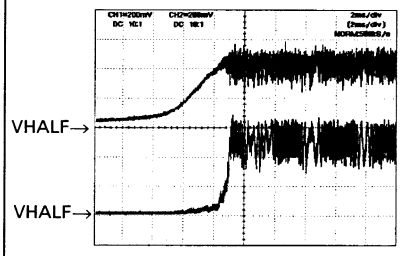
② CH1: ASF
③ CH2: RFENV 200ms/div. 1ms/div.
Focus search



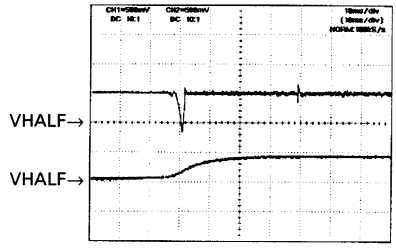
① CH1: FEY 500mV/div. 1ms/div.
④ CH2: FD 1V/div. 1ms/div.
Focus close



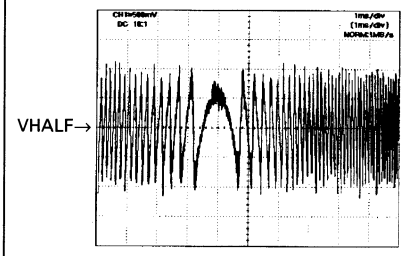
② CH1: ASF
③ CH1: RFENV 200mV/div. 2ms/div.
Focus close



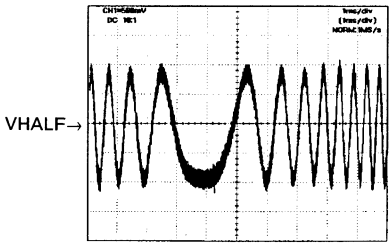
① CH1: FEY 500mV/div. 10ms/div.
⑤ CH2: FOK
Focus close



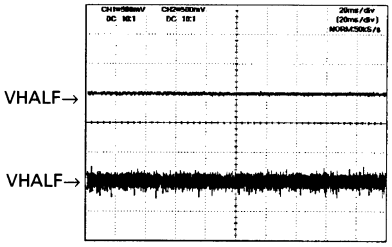
⑥ CH1: TEY 500mV/div. 1ms/div.
Focus close(DVD)



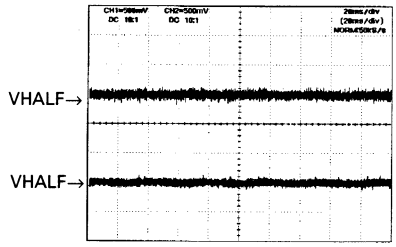
⑥ CH1: TEY 500mV/div. 1ms/div.
Focus close(CD)



① CH1: FEY
④ CH2: FD 500mV/div.20ms/div.
Play

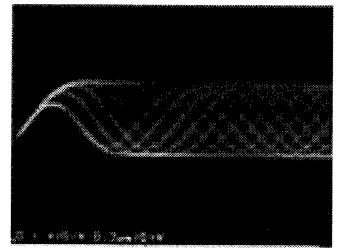


⑥ CH1: TEY
⑦ CH2: TD 500mV/div.20ms/div.
Play

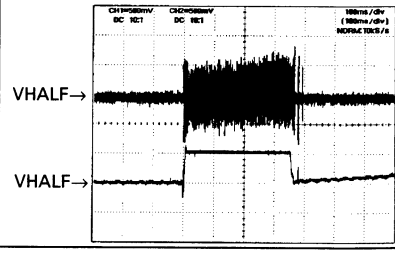


⑧ CH1: RFOUT 0.1V/div. 0.1μs/div.
Play(DVD surroundings on inside)

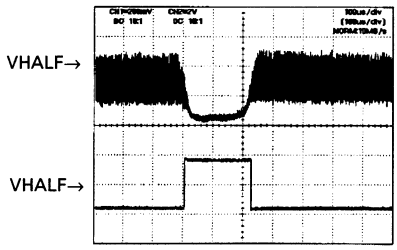
⑧ CH1: RFOUT 0.1V/div. 0.2μs/div.
Play(CD)



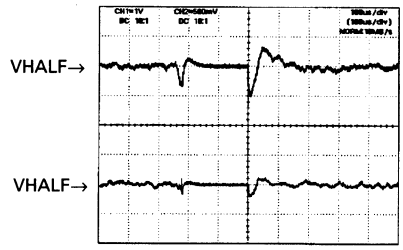
⑥ CH1: TEY 500mV/div. 100ms/div.
⑨ CH2: CRGDRV
Surroundings on inside->
surroundings on outside



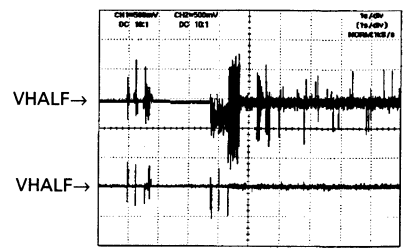
⑧ CH1: RFOUT 200mV/div. 100µs/div.
⑩ CH2: BDO 2V/div. 100µs/div.
Black dot



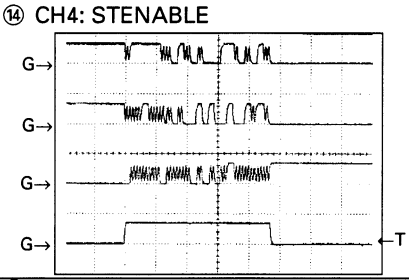
④ CH1: FD 1V/div. 100µs/div.
⑦ CH2: TD 500mV/div. 100µs/div.
Black dot



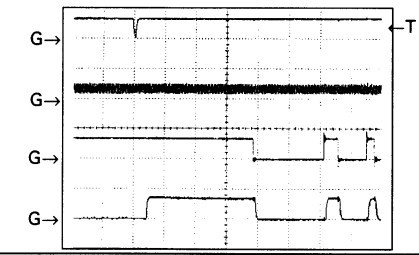
⑥ CH1: TEY 500mV/div.1s/div.
① CH2: FEY
EDC1 mode set up(DVD)



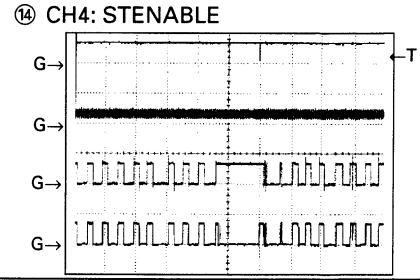
⑪ CH1: STD1
⑫ CH2: STD4
⑬ CH3: STD7
⑭ CH4: STENABLE
5V/div. 2µs/div.



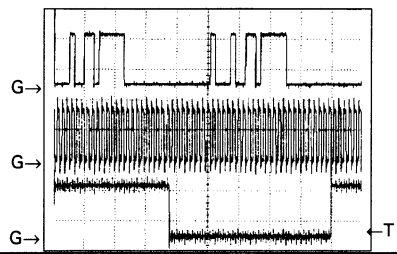
⑮ CH1: AVRTM
⑯ CH2: STCLK
⑰ CH3: STVALID
⑭ CH4: STENABLE
5V/div. 2µs/div.



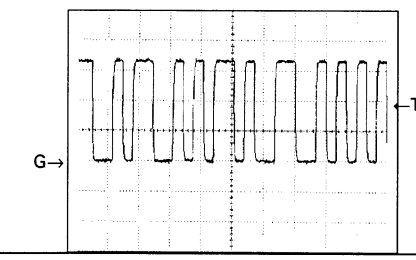
⑮ CH1: AVRTM
⑯ CH2: STCLK
⑰ CH3: STVALID
⑭ CH4: STENABLE
5V/div. 50µs/div.



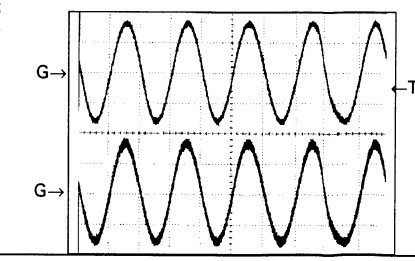
⑱ CH1: AOUT0
⑲ CH2: SRCKAV
⑳ CH3: LRCKAV
2V/div. 2µs/div.



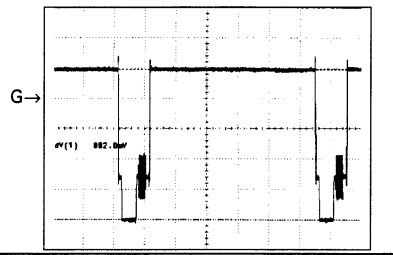
㉑ CH1: IEC958 1V/div. 500ns/div.



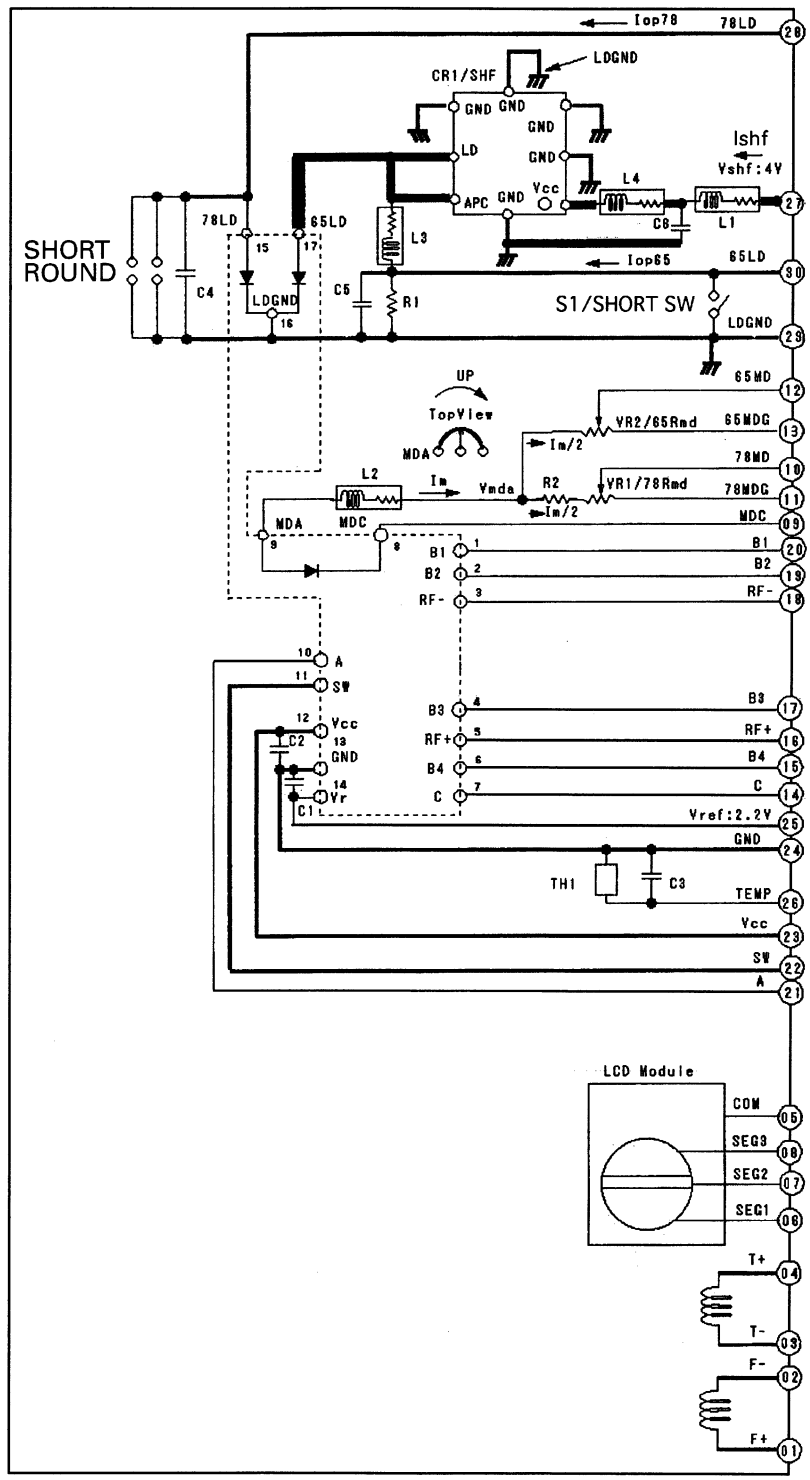
㉒ CH1: LO
㉓ CH2: RO
1V/div. 500µs/div.



㉔ CH1: COMPO 200mV/div. 10µs/div.
[White 100% output]



3.9 PU UNIT(REFERENCE)



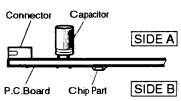
4. PCB CONNECTION DIAGRAM

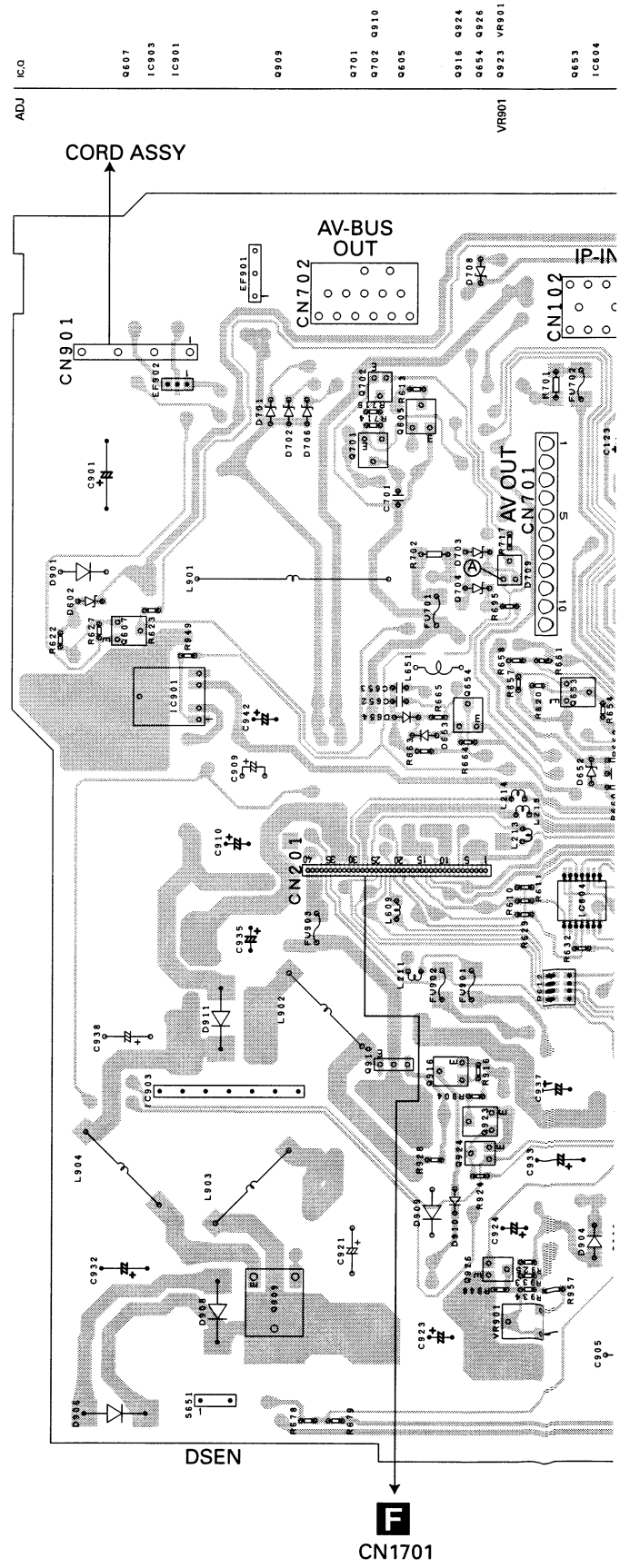
4.1 AUDIO CONTROL PCB

A AUDIO CONTROL PCB

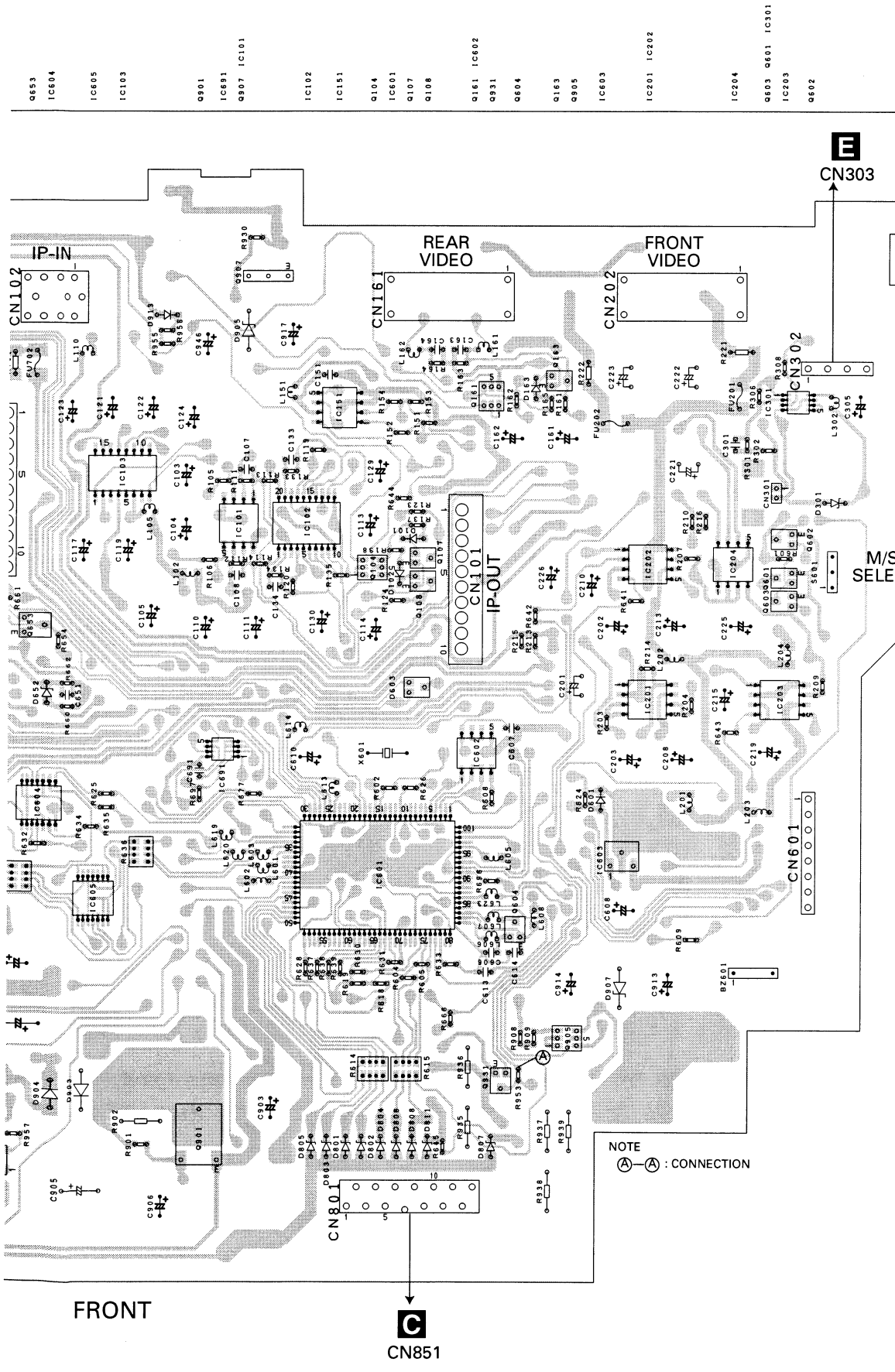
NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams

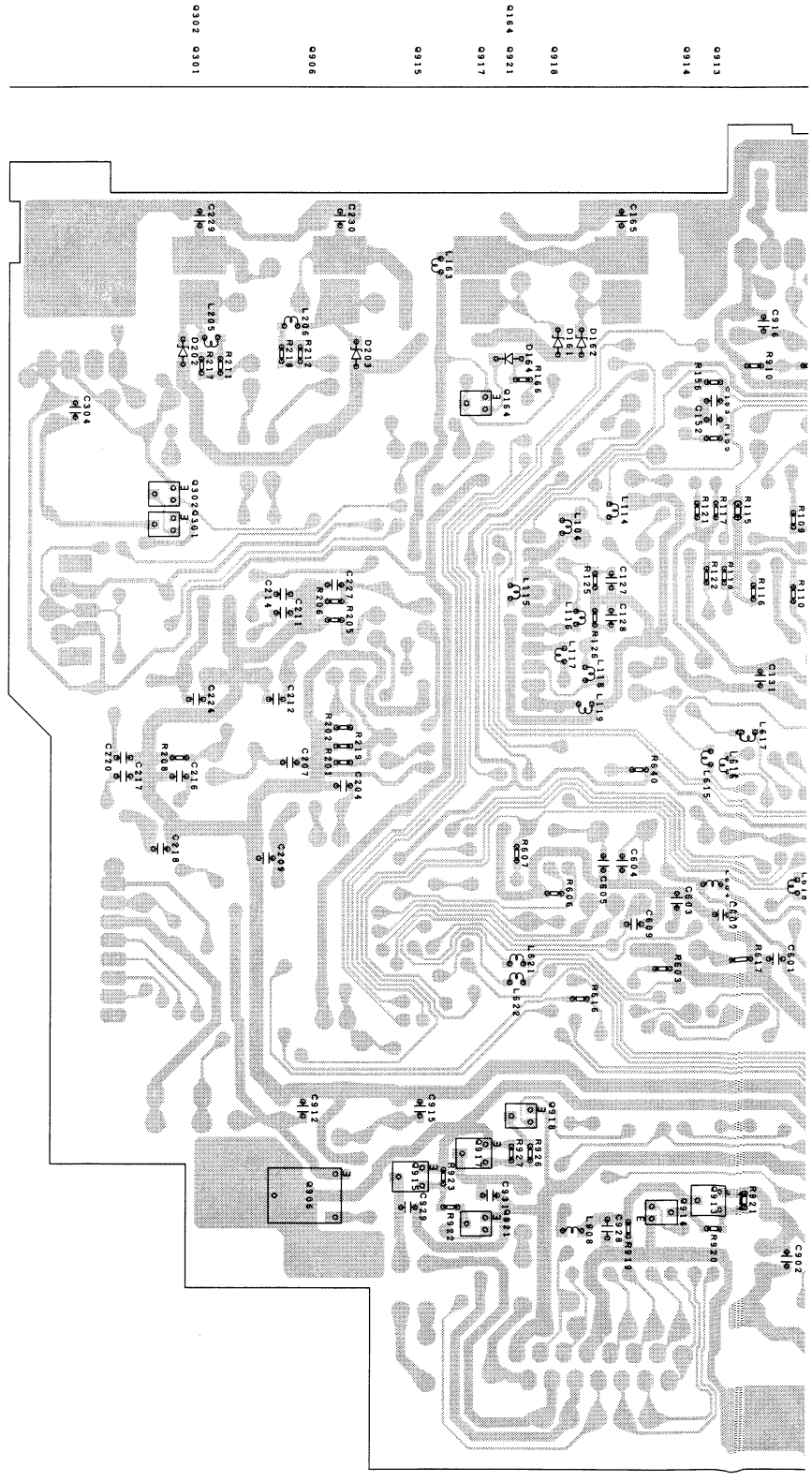




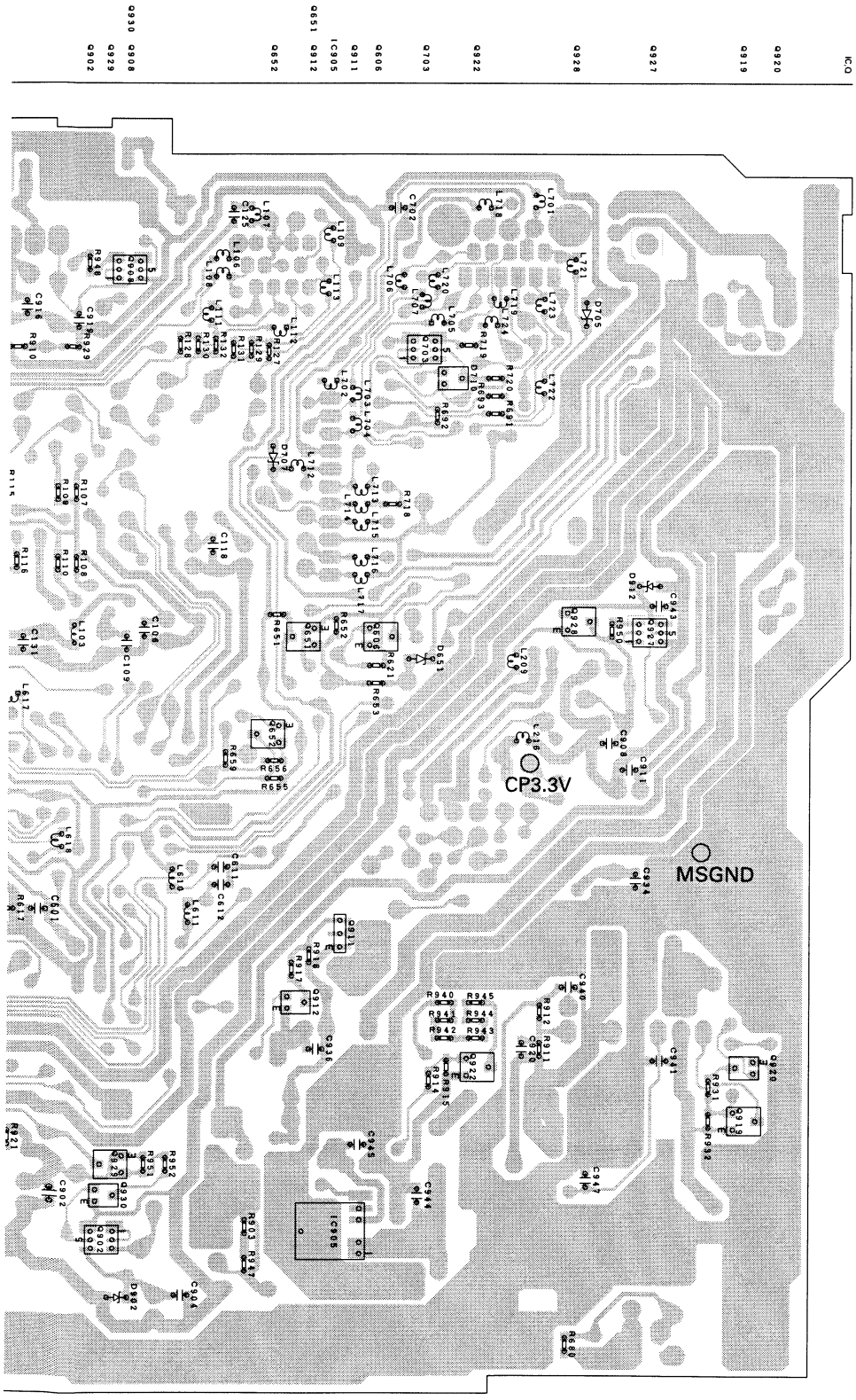
SIDE A


IP-IN
CN102
REAR VIDEO
CN161
FRONT VIDEO
CN202
CN303
CN302
IP-OUT
CN101
M/S SELECT
CN601
CN801
FRONT
CN851
NOTE
Ⓐ—Ⓐ : CONNECTION

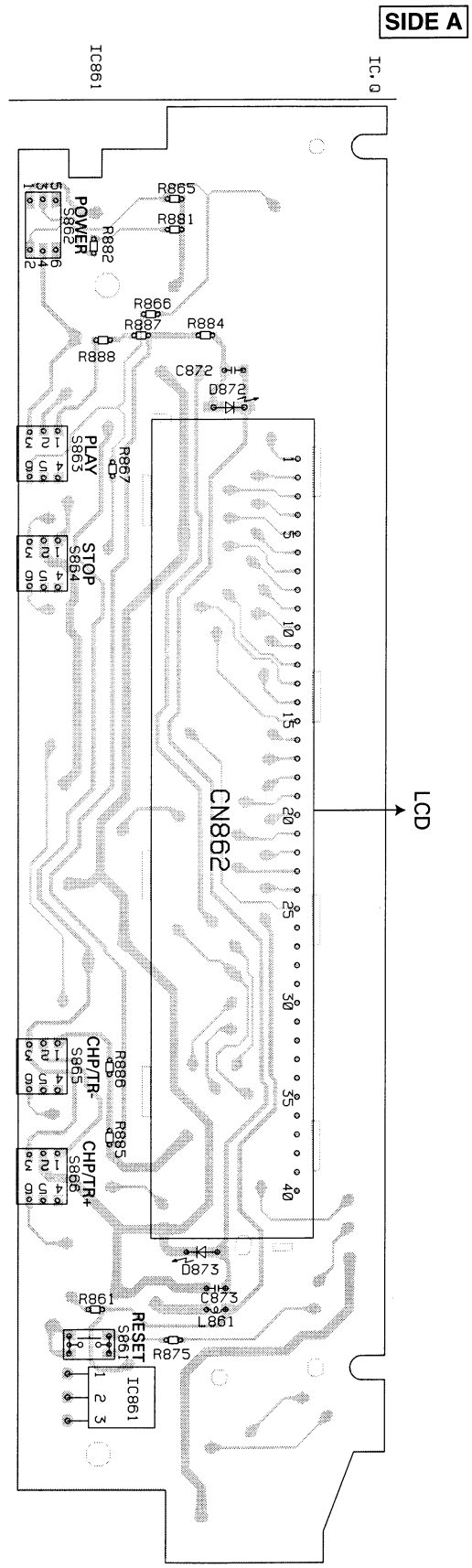
A AUDIO CONTROL PCB

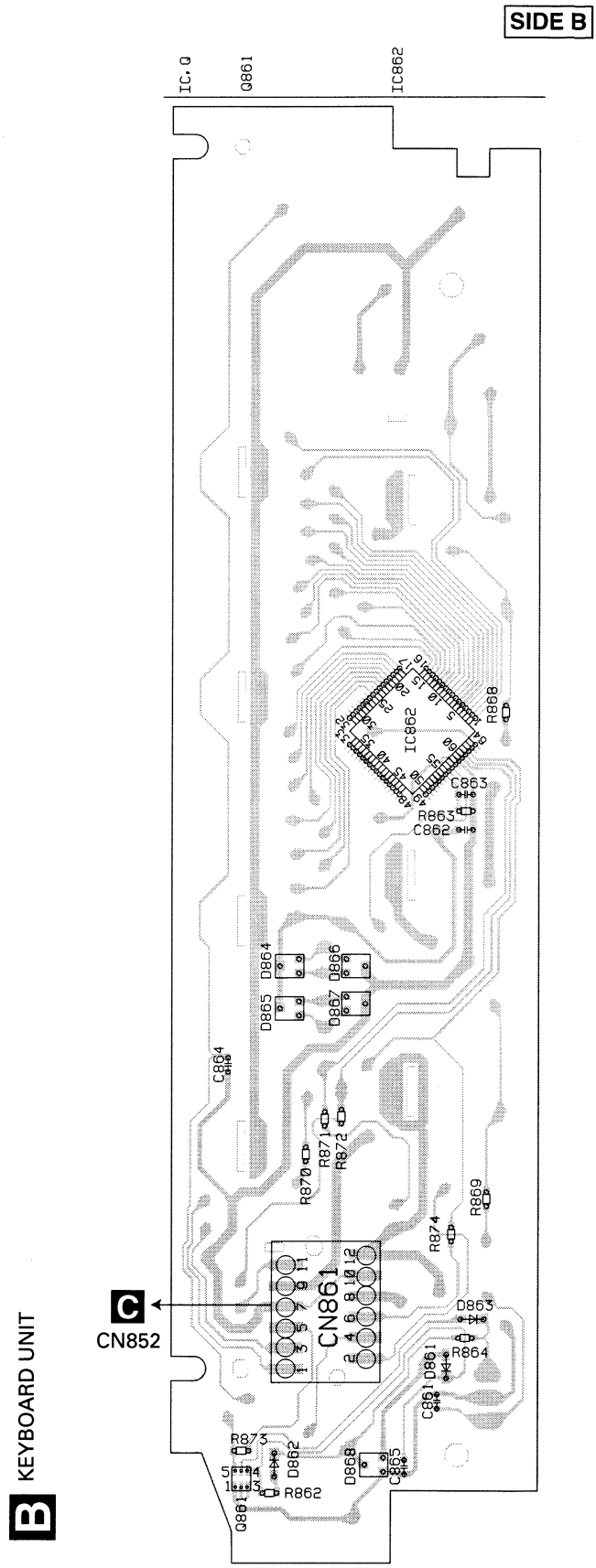


SIDE B



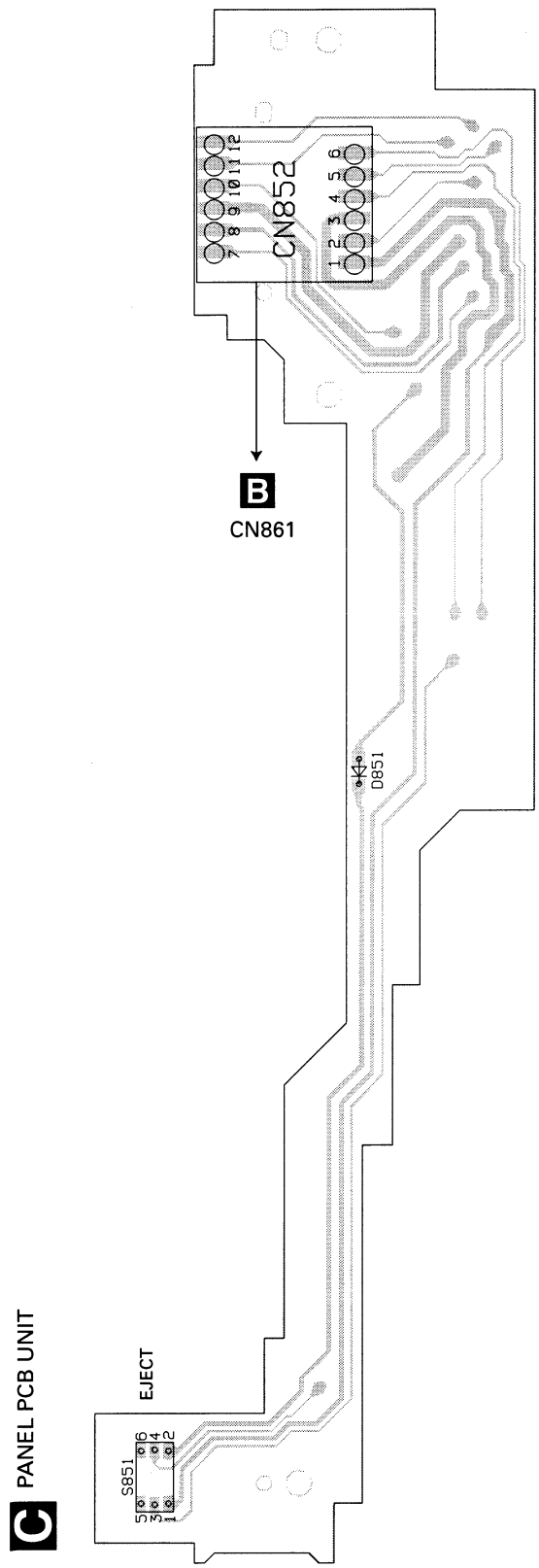
4.2 KEYBOARD UNIT



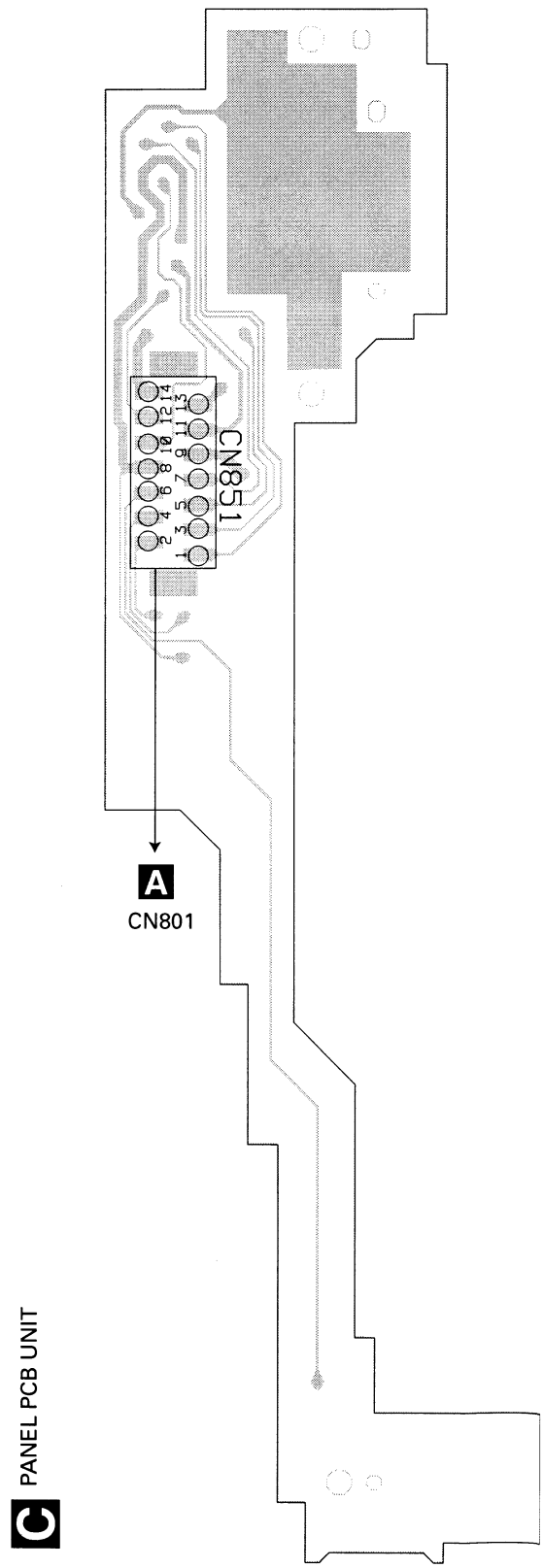


4.3 PANEL PCB UNIT

SIDE A



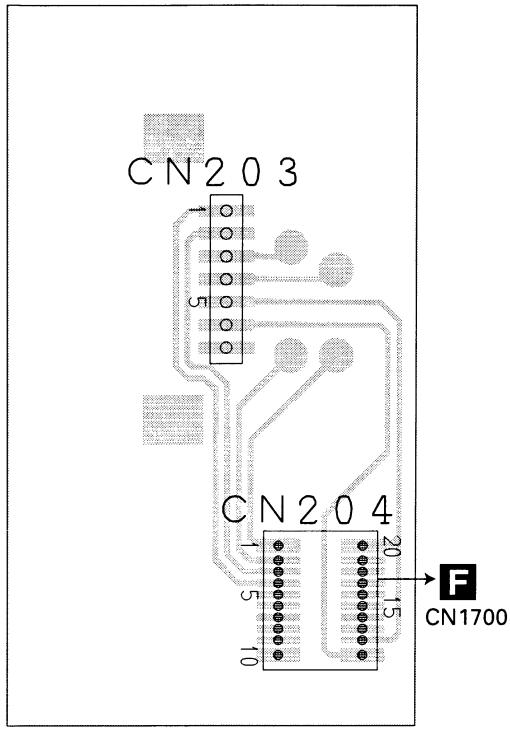
SIDE B



4.4 EXTENSION PCB

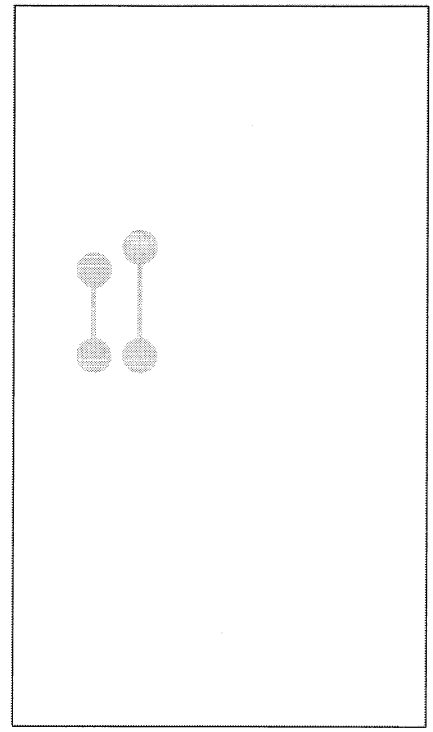
D EXTENSION PCB

SIDE A



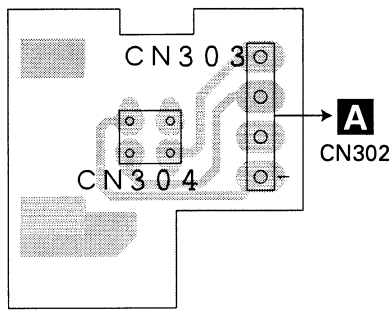
D EXTENSION PCB

SIDE B



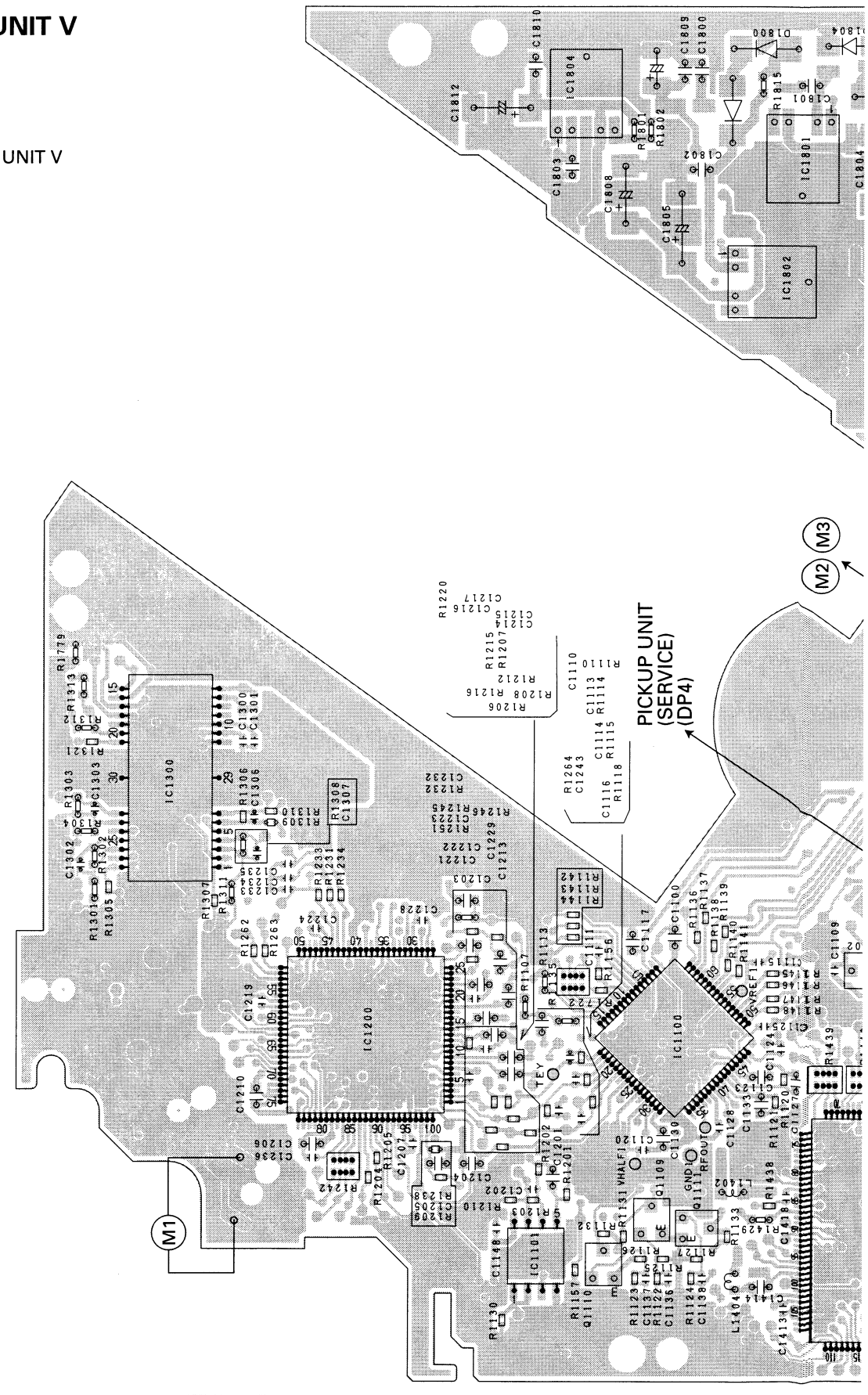
4.5 OPTICAL PCB

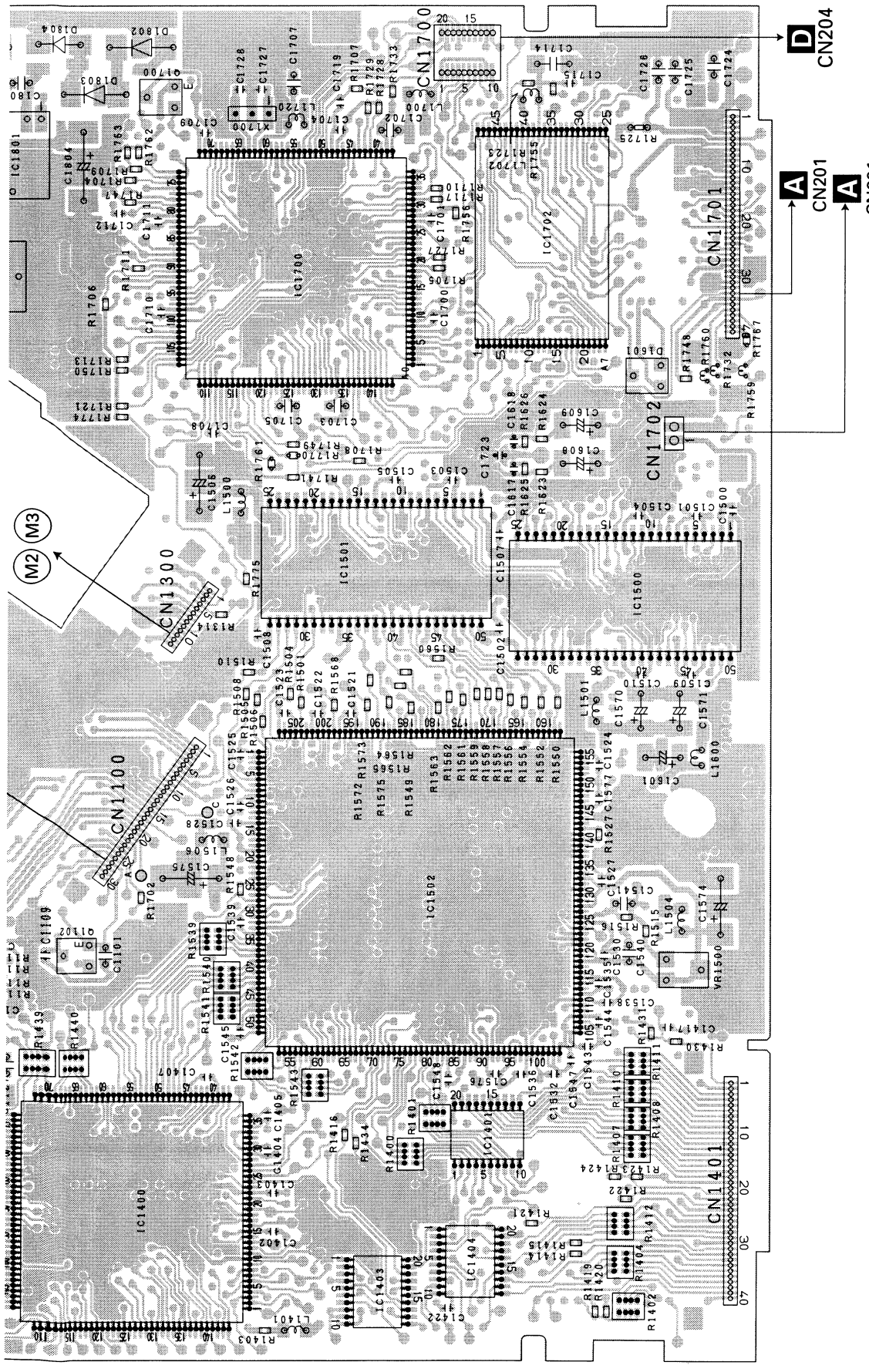
E OPTICAL PCB



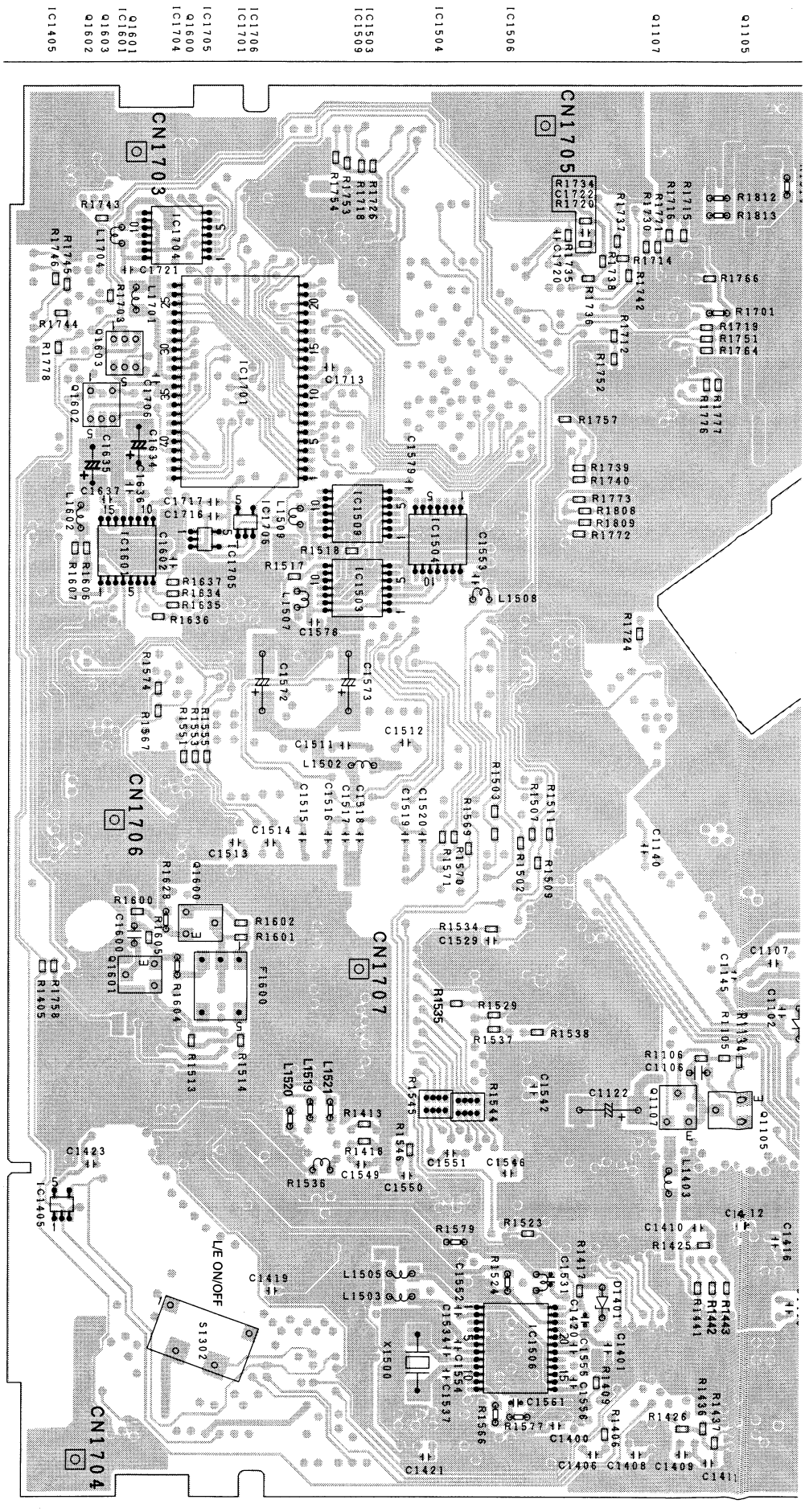
4.6 DVD CORE UNIT V

F DVD CORE UNIT V

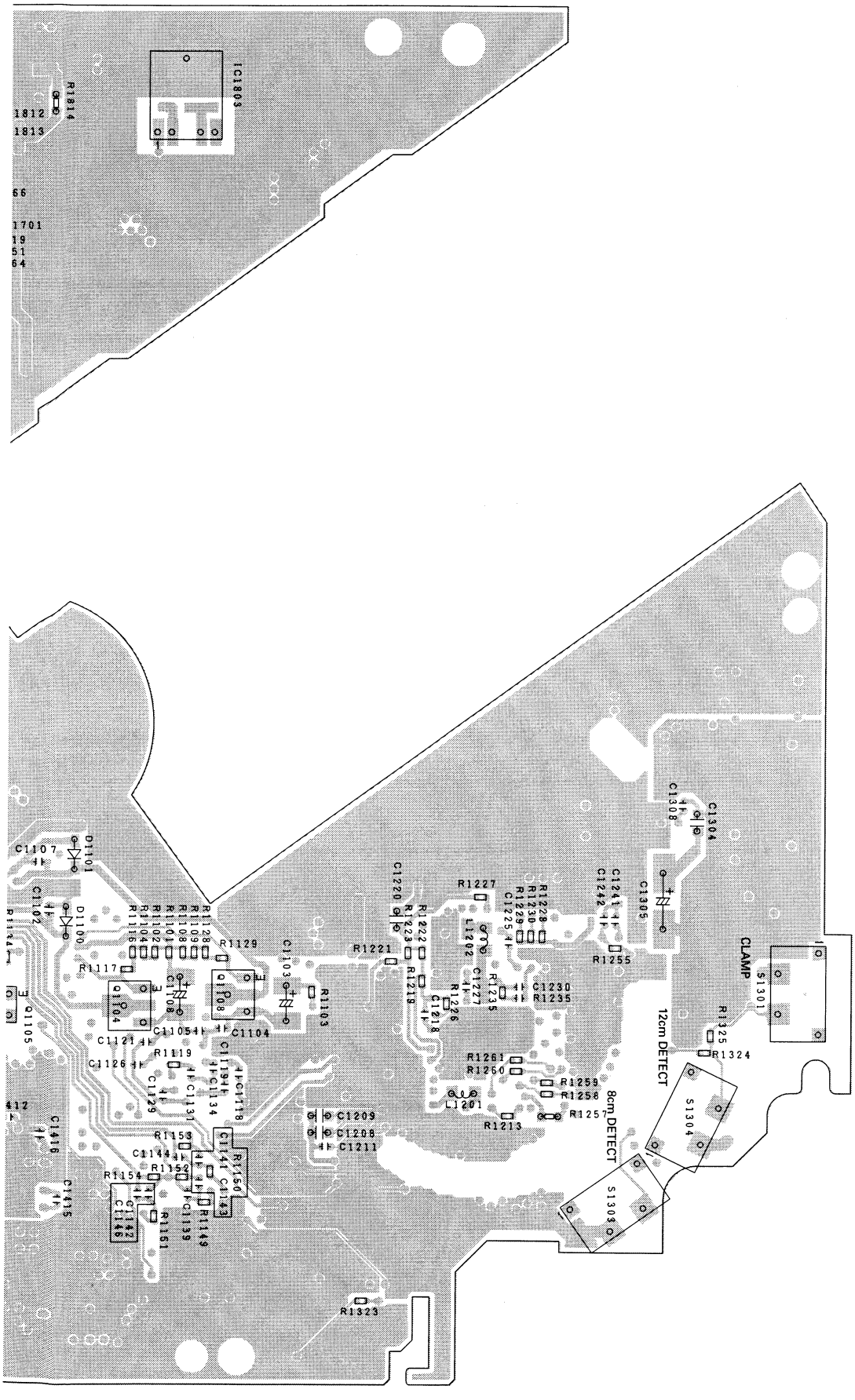



SIDE A
D CN204
A CN201
A CN301
CN1700
CN1701
CN1702
CN1300
CN1100
CN1401
M2
M3
IC1801
Q1102
IC1400
Q1700
IC1700
IC1501
IC1403
IC1502
IC1404
IC1401
IC1702
IC1500
ADJ
VR1500

F DVD CORE UNIT V



SIDE B


IC1803
Q1104
Q1108
IC1803
IC,Q
R1814
1812
1813
66
1701
19
51
64
C1107
D1101
C1102
D1100
R1117
Q1104
Q1103
C1108
C1105
C1104
R1103
R1129
C1121
C1126
R1119
C1129
C1131
C1134
C1119
C1118
C1209
C1208
C1211
R1153
C1144
R1152
R1154
C1145
C1146
R1161
R1150
C1143
R1149
C1139
C1141
C1416
412
R1323
C1220
R1222
R1223
R1218
R1221
R1227
R1228
R1230
C1229
C1225
L1202
C1227
R1235
R1226
C1218
C1230
R1235
R1261
R1260
Q1201
L1201
R1213
R1259
R1258
R1257
C1241
C1242
R1255
C1305
C1308
C1304
CLAMP
S1301
R1325
R1324
12cm DETECT
8cm DETECT
S1304
S1303

5. ELECTRICAL PARTS LIST

NOTES:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/○S○○○J,RS1/○○S○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

Audio Control Unit
Consists of
Audio Control PCB
Extension PCB
Optical PCB

A Unit Number : CWM7684(SDV-P7/UC)
D Unit Number : CWM7683(SDV-P7/EW)
D Unit Number : CWM7685(SDV-P7/ES/RC)
D Unit Number : CWM7686(SDV-P7/ES/RD)
E Unit Name : Audio Control Unit

MISCELLANEOUS

=====Circuit Symbol and No.		===Part Name	Part No.
IC	101	IC	NJM4558MD
IC	102	IC	BA3131FS
IC	103	IC	TA2050F
IC	151	IC	HA12187FP
IC	201	IC	NJM2267M
IC	202	IC	NJM2246M
IC	203	IC	NJM2235M
IC	204	IC	BA7623F
IC	301	IC	TC7WT125FU
IC	601	IC	PE5229A
IC	603	IC	S-80734ANDYI
IC	604	IC	TC74VHCT08AFT
IC	605	IC	TC74VHC08FT
IC	691	IC	TC7W53FU
IC	901	IC	BA08SFP
IC	903	IC	BP5250
IC	905	IC	BA00ASFP
Q	104	Transistor	IMD2A
Q	107	Transistor	DTC323TU
Q	108	Transistor	DTC323TU
Q	161	Transistor	IMD2A
Q	163	Transistor	DTC323TU
Q	164	Transistor	DTC323TU
Q	301	Transistor	DTA123EU
Q	302	Transistor	DTC114EU
Q	601	Transistor	DTC114EU
Q	602	Transistor	DTC124EU
Q	603	Transistor	DTC124EU
Q	604	Transistor	DTA144EU
Q	605	Transistor	DTC124EK
Q	607	Transistor	2SC2412K
Q	651	Transistor	2SC2412K
Q	652	Transistor	2SC2412K
Q	653	Transistor	2SC2412K
Q	654	Transistor	2SA1037K
Q	701	Transistor	2SA1037K
Q	702	Transistor	DTC124EU
Q	703	Transistor	IMD2A
Q	901	Transistor	2SD1760F5
Q	902	Transistor	IMD2A

=====Circuit Symbol and No.		===Part Name	Part No.
Q	905	Transistor	IMD2A
Q	906	Transistor	2SD1760F5
Q	907	Transistor	2SD2396
Q	908	Transistor	IMD2A
Q	909	Transistor	2SJ529S
Q	910	Transistor	2SA1797
Q	911	Transistor	2SA1797
Q	912	Transistor	DTC124EU
Q	913	Transistor	2SA1037K
Q	914	Transistor	DTC124EU
Q	915	Transistor	2SA1037K
Q	916	Transistor	2SA1037K
Q	917	Transistor	2SA1037K
Q	918	Transistor	DTC124EU
Q	919	Transistor	2SA1037K
Q	920	Transistor	DTC124EU
Q	921	Transistor	DTC124EU
Q	922	Transistor	2SC2412K
Q	923	Transistor	2SC2412K
Q	924	Transistor	DTC114EU
Q	926	Transistor	DTC114EU
Q	927	Transistor	IMD2A
Q	928	Transistor	2SC2412K
Q	929	Transistor	2SA1037K
Q	930	Transistor	DTC124EU
Q	931	Transistor	DTC115EUA
D	101	Diode	1SS355
D	102	Diode	1SS355
D	163	Diode	1SS355
D	164	Diode	1SS355
D	202	Diode	UDZ12(B)
D	203	Diode	UDZ12(B)
D	601	Diode	MA111
D	602	Diode	UDZ8R2(B)
D	603	Diode	DAN202U
D	651	Diode	UDZ7R5(B)
D	652	Diode	UDZ5R6(B)
D	653	Diode	MA111
D	654	Diode	MA111
D	701	Diode	UDZ12(B)
D	702	Diode	UDZ12(B)
D	703	Diode	UDZ12(B)
D	704	Diode	UDZ12(B)
D	705	Diode	UDZ12(B)
D	706	Diode	UDZ12(B)
D	707	Diode	UDZ12(B)
D	708	Diode	UDZ12(B)
D	709	Diode	DAN202U
D	710	Diode	DAN202U
D	801	Diode	UDZ12(B)
D	802	Diode	UDZ12(B)
D	803	Diode	UDZ12(B)
D	804	Diode	UDZ12(B)
D	805	Diode	UDZ12(B)
D	806	Diode	UDZ12(B)

Circuit Symbol and No.		Part Name	Part No.
D	807	Diode	UDZ12(B)
D	808	Diode	UDZ12(B)
D	811	Diode	UDZ12(B)
D	901	Diode	ERA15-02VH
D	902	Diode	UDZS5R6(B)
D	903	Diode	ERA15-02VH
D	904	Diode	SC802-06
D	905	Diode	HZS9L(B1)
D	906	Diode	F2J4S
D	907	Diode	HZS6L(B2)
D	908	Diode	F2J4S
D	909	Diode	ERA15-02VH
D	910	Diode	MA111
D	911	Diode	F2J4S
D	912	Diode	UDZS5R6(B)
D	913	Diode	MA111
L	102	Inductor	CTF1399
L	103	Inductor	CTF1399
L	104	Inductor	CTF1473
L	105	Inductor	CTF1379
L	106	Inductor	CTF1379
L	107	Inductor	CTF1473
L	108	Inductor	CTF1379
L	109	Inductor	CTF1379
L	110	Inductor	CTF1379
L	111	Inductor	CTF1379
L	112	Inductor	CTF1379
L	113	Inductor	CTF1379
L	114	Inductor	CTF1379
L	115	Inductor	CTF1379
L	116	Inductor	CTF1379
L	117	Inductor	CTF1379
L	118	Inductor	CTF1379
L	119	Inductor	CTF1473
L	151	Inductor	CTF1379
L	161	Inductor	CTF1379
L	162	Inductor	CTF1379
L	163	Inductor	CTF1473
L	201	Inductor	CTF1399
L	202	Inductor	CTF1305
L	203	Inductor	CTF1305
L	204	Inductor	LCTA150J2520
L	205	Inductor	CTF1383
L	206	Inductor	CTF1383
L	209	Inductor	CTF1473
L	211	Inductor	CTF1379
L	213	Inductor	CTF1379
L	214	Inductor	CTF1379
L	215	Inductor	CTF1473
L	216	Inductor	CTF1473
L	302	Inductor	CTF1379
L	601	Inductor	CTF1379
L	602	Inductor	CTF1305
L	603	Inductor	CTF1379
L	604	Inductor	CTF1420
L	605	Inductor	CTF1420
L	606	Inductor	CTF1306
L	607	Inductor	CTF1306
L	608	Inductor	CTF1399
L	609	Inductor	CTF1420
L	610	Inductor	CTF1305
L	611	Inductor	CTF1305
L	613	Inductor	CTF1379
L	614	Inductor	CTF1379
L	615	Inductor	CTF1379
L	616	Inductor	CTF1379
L	617	Inductor	CTF1379
L	618	Inductor	CTF1379
L	619	Inductor	CTF1379
L	620	Inductor	CTF1379

Circuit Symbol and No.		Part Name	Part No.
L	621	Inductor	CTF1379
L	622	Inductor	CTF1379
L	623	Inductor	CTF1379
L	651	Ferri-Inductor	LAU2R2K
L	701	Inductor	CTF1473
L	702	Inductor	CTF1379
L	703	Inductor	CTF1379
L	704	Inductor	CTF1379
L	705	Inductor	CTF1379
L	706	Inductor	CTF1379
L	707	Inductor	CTF1379
L	712	Inductor	CTF1383
L	713	Inductor	CTF1379
L	714	Inductor	CTF1379
L	715	Inductor	CTF1473
L	716	Inductor	CTF1379
L	717	Inductor	CTF1379
L	718	Inductor	CTF1383
L	719	Inductor	CTF1379
L	720	Inductor	CTF1379
L	721	Inductor	CTF1473
L	722	Inductor	CTF1379
L	723	Inductor	CTF1379
L	724	Inductor	CTF1379
L	901	Coil	CTH1113
L	902	Coil	CTH1246
L	903	Coil	CTH1246
L	904	Coil	CTH1246
L	908	Inductor	CTF1399
X	601	Radiator 12.5829MHz	CSS1495
S	601	Slide Switch(M/S SELECT)	CSH1051
S	651	Switch(DSEN)	CSN1039
FU	201	Fuse 2A	CEK1190
FU	202	Fuse 2A	CEK1190
FU	701	Fuse 2A	CEK1190
FU	702	Fuse 2A	CEK1190
FU	901	Fuse 400mA	CEK1184
FU	902	Fuse 400mA	CEK1184
FU	903	Fuse 2A	CEK1190
EF	901	Filter	CCG1164
EF	902	EMI Filter	CCG1165
BZ	601	Buzzer	CPV1050
VR	901	Semi-fixed 470Ω(B)	CCP1338

RESISTORS

R	105		RS1/16S 152J
R	106		RS1/16S 152J
R	107		RS1/16S 333J
R	108		RS1/16S 333J
R	111		RS1/16S 0R0J
R	112		RS1/16S 0R0J
R	113		RS1/16S 472J
R	114		RS1/16S 472J
R	115		RS1/16S 104J
R	116		RS1/16S 104J
R	117		RS1/16S 473J
R	118		RS1/16S 473J
R	119		RS1/16S 332J
R	120		RS1/16S 332J
R	121		RS1/16S 473J
R	122		RS1/16S 473J
R	123		RS1/16S 821J
R	124		RS1/16S 821J
R	125		RS1/16S 223J
R	126		RS1/16S 223J
R	127		RS1/16S 102J
R	128		RS1/16S 102J
R	129		RS1/16S 223J
R	130		RS1/16S 223J
R	131		RS1/16S 181J

SDV-P7

=====Circuit Symbol and No.		===Part Name	Part No.
R	132		RS1/16S181J
R	133		RS1/16S472J
R	134		RS1/16S472J
R	135		RS1/16S473J
R	137		RS1/16S102J
R	138		RS1/16S102J
R	151		RS1/16S473J
R	152		RS1/16S102J
R	153		RS1/16S473J
R	154		RS1/16S102J
R	155		RS1/16S101J
R	156		RS1/16S101J
R	161		RS1/16S821J
R	162		RS1/16S821J
R	163		RS1/16S223J
R	164		RS1/16S223J
R	165		RS1/16S102J
R	166		RS1/16S102J
R	201		RS1/16S151J
R	202		RS1/16S105J
R	203		RS1/16S101J
R	204		RS1/16S101J
R	205		RS1/16S105J
R	206		RS1/16S105J
R	207		RS1/16S101J
R	208		RS1/16S105J
R	209		RS1/16S101J
R	210		RS1/16S151J
R	211		RS1/16S151J
R	212		RS1/16S151J
R	213		RS1/16S151J
R	214		RS1/16S105J
R	215		RS1/16S151J
R	216		RS1/16S151J
R	217		RS1/16S151J
R	218		RS1/16S151J
R	219		RS1/16S151J
R	221		RS1/8S0R0J
R	222		RS1/8S0R0J
R	301		RS1/16S621J
R	302		RS1/16S221J
R	306		RS1/16S473J
R	308		RS1/16S361J
R	601		RS1/16S473J
R	602		RS1/16S102J
R	603		RS1/16S473J
R	604		RS1/16S473J
R	605		RS1/16S473J
R	606		RS1/16S473J
R	607		RS1/16S473J
R	609		RS1/16S102J
R	610		RS1/16S102J
R	611		RS1/16S102J
R	612		RAB4C102J
R	613		RS1/16S102J
R	614		RAB4C102J
R	615		RAB4C102J
R	616		RS1/16S102J
R	617		RS1/16S473J
R	618	(SDV-P7/UC)	RS1/16S333J
		(SDV-P7/EW)	RS1/16S223J
		(SDV-P7/ES/RC)	RS1/16S103J
		(SDV-P7/ES/RD)	RS1/16S473J
R	619	(SDV-P7/UC)	RS1/16S103J
		(SDV-P7/EW)	RS1/16S223J
		(SDV-P7/ES/RC)	RS1/16S333J
R	622		RS1/16S103J
R	623		RS1/16S473J
R	624		RS1/16S224J
R	625		RS1/16S102J

=====Circuit Symbol and No.		===Part Name	Part No.
R	626		RS1/16S102J
R	627		RS1/16S473J
R	628		RS1/16S473J
R	629		RS1/16S102J
R	630		RS1/16S473J
R	631		RS1/16S473J
R	632		RS1/16S102J
R	633		RS1/16S473J
R	634		RS1/16S102J
R	635		RS1/16S102J
R	636		RAB4C102J
R	640		RS1/16S473J
R	641		RS1/16S472J
R	642		RS1/16S102J
R	643		RS1/16S472J
R	644		RS1/16S473J
R	645		RS1/16S333J
R	651		RS1/16S473J
R	652		RS1/16S473J
R	653		RS1/16S223J
R	654		RS1/16S223J
R	655		RS1/16S223J
R	656		RS1/16S4R7J
R	657		RS1/16S473J
R	658		RS1/16S222J
R	659		RS1/16S223J
R	660		RS1/16S472J
R	661		RS1/16S183J
R	662		RS1/16S182J
R	663		RS1/16S473J
R	664		RS1/16S473J
R	665		RS1/16S103J
R	666		RS1/16S153J
R	677		RS1/16S102J
R	678		RS1/16S102J
R	679		RS1/16S473J
R	691		RS1/16S102J
R	692		RS1/16S473J
R	693		RS1/16S102J
R	695		RS1/16S102J
R	696		RS1/16S102J
R	701		RS1/8S0R0J
R	702		RS1/8S0R0J
R	714		RS1/16S332J
R	715		RS1/16S822J
R	718		RS1/16S102J
R	719		RS1/16S102J
R	901		RS1/16S682J
R	902		RD1/4PU122J
R	904		RS1/16S473J
R	908		RS1/16S561J
R	909		RS1/16S561J
R	910		RS1/16S472J
R	911		RS1/16S3002D
R	912		RS1/16S1002D
R	914		RS1/16S332J
R	915		RS1/16S473J
R	916		RS1/16S473J
R	917		RS1/16S391J
R	918		RS1/16S561J
R	919		RS1/16S473J
R	920		RS1/16S682J
R	921		RS1/16S273J
R	922		RS1/16S822J
R	923		RS1/16S392J
R	924		RS1/16S473J
R	925		RS1/16S1001D
R	926		RS1/16S183J
R	927		RS1/16S153J
R	928		RS1/16S472J

=====Circuit Symbol and No.		===Part Name	Part No.
R	929		RS1/16S222J
R	930		RS1/16S221J
R	931		RS1/16S183J
R	932		RS1/16S153J
R	933		RS1/16S3301D
R	935		RD1/4PU241J
R	936		RD1/4PU241J
R	937		RD1/4PU470J
R	938		RD1/4PU390J
R	939		RD1/4PU390J
R	940		RS1/16S180J
R	941		RS1/16S180J
R	942		RS1/16S180J
R	943		RS1/16S180J
R	944		RS1/16S180J
R	945		RS1/16S180J
R	946		RS1/16S4700D
R	948		RS1/16S221J
R	949		RS1/16S102J
R	950		RS1/16S391J
R	951		RS1/16S473J
R	952		RS1/16S332J
R	953		RS1/16S223J
R	955		RS1/16S391J
R	956		RS1/16S391J
R	957		RS1/16S1801F

CAPACITORS

C	103		CEJQ100M16
C	104		CEJQ100M16
C	105		CEJQ101M6R3
C	106		CKSRYB104K16
C	109		CKSRYB104K16
C	110		CEJQ100M16
C	111		CEJQ101M10
C	113		CEJQ4R7M25
C	114		CEJQ4R7M25
C	115		CEJQNP100M10
C	116		CEJQNP100M10
C	117		CEJQ100M16
C	118		CKSRYB104K16
C	119		CEJQ100M16
C	121		CEJQ1R0M50
C	122		CEJQ1R0M50
C	123		CEJQ1R0M50
C	124		CEJQ1R0M50
C	125		CKSRYB104K16
C	129		CEJQ220M6R3
C	130		CEJQ101M6R3
C	131		CKSRYB103K50
C	133		CCSRCH220J50
C	134		CCSRCH220J50
C	151		CKSRYB104K16
C	152		CCSRCH471J50
C	153		CCSRCH471J50
C	161		CEJQ4R7M25
C	162		CEJQ4R7M25
C	165		CCSRCH221J50
C	201	470µF/6.3V	CCH1182
C	202		CEJQ4R7M25
C	203		CEJQ1R0M50
C	204		CCSRCH220J50
C	207		CCSRCH220J50
C	208		CEJQ101M6R3
C	209		CKSRYB104K16
C	210		CEJQ100M16
C	211		CKSRYB104K16
C	212		CKSRYB103K50

=====Circuit Symbol and No.		===Part Name	Part No.
C	213		CEJQ470M6R3
C	214		CCSRCH220J50
C	215		CEJQ100M16
C	216		CKSRYB104K16
C	217		CKSRYB104K16
C	218		CKSRYB103K50
C	219		CEJQ470M6R3
C	220		CCSRCH220J50
C	221	470µF/6.3V	CCH1182
C	222	470µF/6.3V	CCH1182
C	223	470µF/6.3V	CCH1182
C	224		CKSRYB223K25
C	225		CEJQ470M6R3
C	226		CEJQ100M16
C	229		CCSRCH221J50
C	230		CCSRCH221J50
C	301		CCSRCH150J50
C	304		CKSRYB104K16
C	305		CEJQ100M16
C	601		CKSRYB103K50
C	602		CCSRCH101J50
C	604		CCSRCH270J50
C	605		CCSRCH270J50
C	606		CCSRCH101J50
C	608		CEJQ1R0M50
C	609		CKSRYB103K50
C	610		CEJQ1R0M50
C	611		CKSRYB102K50
C	612		CKSRYB102K50
C	613		CKSRYB102K50
C	614		CKSRYB102K50
C	651		CKSRYB472K50
C	652		CKSRYB103K50
C	691		CKSRYB104K16
C	701		CKSRYB103K50
C	702		CCSRCH221J50
C	901	2200µF/16V	CCH1383
C	902		CKSRYB103K50
C	903		CEJQ101M10
C	904		CKSRYB103K50
C	905	1500µF/16V	CCH1312
C	906		CEJQ100M16
C	908		CKSRYB103K50
C	909	220µF/16V	CCH1180
C	910		CEJQ101M16
C	911		CKSRYB103K50
C	912		CKSRYB103K50
C	913		CEJQ101M10
C	914		CEJQ101M16
C	915		CKSRYB103K50
C	916		CKSRYB103K50
C	917		CEJQ101M10
C	919		CKSRYB103K50
C	920		CKSRYB104K16
C	921		CASA221M10
C	923		CEJQR33M50
C	924		CEJQ220M10
C	928		CKSQYB104K25
C	929		CKSRYB103K50
C	931		CKSRYB103K50
C	932		CEHAZL471M16
C	933	0.1F/5.5V	CCL1023
C	934		CKSRYB102K50
C	935	470µF/10V	CCH1019
C	936		CKSRYB102K50
C	937	470µF/10V	CCH1019
C	938	3300µF/16V	CCH1015
C	940		CKSRYB104K16
C	941		CKSRYB104K16
C	942		CEJQ100M16

=====Circuit Symbol and No.		===Part Name	Part No.
C	943		CKSRYB102K50
C	944		CKSRYB103K50
C	945		CKSRYB103K50
C	946		CEJQ100M16
C	947		CKSRYB222K50

B Unit Number : CWM7888
Unit Name : Keyboard Unit

MISCELLANEOUS

IC	861	IC	TSOP1840SB1
IC	862	IC	LC75822W
D	864	Diode	DAN202U
D	865	Diode	DAN202U
D	866	Diode	DAP202U
D	867	Diode	DAP202U
D	868	Diode	DAN217U
D	872	LED	NSSW440-9159
D	873	LED	NSSW440-9159
L	861	Inductor	LCTA2R2J2520
S	861	Push Switch(RESET)	CSG1111
S	862	Push Switch	CSG1112
S	863	Switch	CSG1107
S	864	Switch	CSG1107
S	865	Switch	CSG1107
S	866	Switch	CSG1107
		LCD	CAW1687

RESISTORS

R	861	RS1/16S101J
R	863	RS1/16S104J
R	864	RS1/16S0R0J
R	865	RS1/16S472J
R	866	RS1/16S122J
R	867	RS1/16S182J
R	868	RS1/16S392J
R	869	RS1/16S123J
R	870	RS1/16S102J
R	871	RS1/16S102J
R	872	RS1/16S102J
R	873	RS1/16S101J
R	874	RS1/16S102J
R	875	RS1/16S472J
R	881	RS1/16S680J
R	882	RS1/16S820J
R	884	RS1/16S180J
R	885	RS1/16S820J
R	886	RS1/16S820J
R	887	RS1/16S820J
R	888	RS1/16S820J

CAPACITORS

C	861	CKSRYB104K16
C	862	CKSRYB473K50
C	863	CCSRCH331J50
C	864	CKSRYB103K50
C	872	CKSQYB104K25
C	873	CKSQYB104K25

C Unit Number : CWM7887
Unit Name : Panel PCB Unit

MISCELLANEOUS

D	851	LED	CL220PGC
S	851	Push Switch(EJECT)	CSG1112

=====Circuit Symbol and No.		===Part Name	Part No.

F Unit Number : CWX2574
Unit Name : DVD Core Unit V

MISCELLANEOUS

IC	1100	IC	AN8702FH
IC	1101	IC	NJM2904M
IC	1200	IC	MN677061ZYUB
IC	1300	IC	BA5985FM
IC	1400	IC	MNZS25BDAUB
IC	1403	IC	TC74LCX244FT
IC	1405	IC	TC7SH04FU
IC	1500	IC	MSM56V16160F8TKFM
IC	1501	IC	MSM56V16160F8TKFM
IC	1502	IC	MN677532JAUB
IC	1503	IC	TC74VCX74FT
IC	1504	IC	TC74VCX04FT
IC	1506	IC	SM8703AV
IC	1509	IC	TC74VCX74FT
IC	1601	IC	AK4380VT
IC	1700	IC	PE5277A
IC	1701	IC	M5M5V216ATP-70HI
IC	1702	IC	PD6354B
IC	1704	IC	TC74VCX08FT
IC	1705	IC	TC7SH04FU
IC	1706	IC	TC7SH32FU
IC	1802	IC	BA033SFP
IC	1803	IC	BA18BC0WFP
IC	1804	IC	BA00BC0WFP
Q	1102	Transistor	2SD601A
Q	1104	Transistor	2SB1260
Q	1105	Transistor	2SB709A
Q	1107	Transistor	UN2211
Q	1108	Transistor	2SB1260
Q	1109	Chip Transistor	2SC2712
Q	1110	Chip Transistor	2SC2712
Q	1111	Chip Transistor	2SC2712
Q	1600	Transistor	2SA1037K
Q	1601	Transistor	2SA1037K
Q	1602	Transistor	FMG12
Q	1603	Transistor	IMD2A
Q	1700	Transistor	DTA123JK
D	1100	Diode	1SS355
D	1101	Diode	1SS355
D	1401	Diode	UDZ2R7(B)
D	1601	Chip Diode	MA151WA
D	1802	Diode	S2G-6600
D	1804	Diode	1SR154-400
L	1201	Inductor	CTF1409
L	1202	Inductor	CTF1409
L	1401	Inductor	CTF1409
L	1402	Inductor	CTF1409
L	1403	Inductor	CTF1395
L	1404	Inductor	CTF1473
L	1500	Inductor	CTF1395
L	1501	Inductor	CTF1394
L	1502	Inductor	CTF1409
L	1503	Inductor	CTF1399
L	1504	Inductor	CTF1399
L	1505	Inductor	CTF1399
L	1506	Inductor	CTF1409
L	1507	Inductor	CTF1473
L	1508	Inductor	CTF1473
L	1509	Inductor	CTF1473
L	1512	Inductor	CTF1470
L	1536	Inductor	CTF1470
L	1600	Inductor	CTF1473
L	1602	Inductor	CTF1399
L	1700	Inductor	CTF1395
L	1701	Inductor	CTF1409

=====Circuit Symbol and No.		===Part Name	Part No.
L	1702	Inductor	CTF1473
L	1704	Inductor	CTF1473
L	1720	Inductor	CTF1473
X	1500	Resonator 27MHz	CSS1531
X	1700	Ceramic Resonator 5MHz	CSS1547
S	1301	Spring Switch(CLAMP)	CSN1051
S	1302	Spring Switch(L/E ON/OFF)	CSN1051
S	1303	Spring Switch(8cm DETECT)	CSN1051
S	1304	Spring Switch(12cm DETECT)	CSN1051
VR	1500	Semi-fixed 2.2kΩ(B)	CCP1177
F	1600	Filter	CTF1515

RESISTORS

R	1101		RS1/16SS330J
R	1102		RS1/16SS3R9J
R	1103		RS1/16SS330J
R	1104		RS1/16SS3R9J
R	1105		RS1/16SS122J
R	1106		RS1/16SS472J
R	1107		RS1/16S6201D
R	1108		RS1/16SS3R9J
R	1109		RS1/16SS3R9J
R	1110		RS1/16S1002D
R	1113		RS1/16S2402D
R	1114		RS1/16SS823J
R	1115		RS1/16SS682J
R	1116		RS1/16SS3R9J
R	1117		RS1/16SS3R9J
R	1118		RS1/16SS223J
R	1119		RS1/16SS202J
R	1120		RS1/16SS105J
R	1121		RS1/16SS105J
R	1122		RS1/16SS103J
R	1123		RS1/16SS103J
R	1124		RS1/16SS103J
R	1125		RS1/16SS103J
R	1126		RS1/16SS103J
R	1127		RS1/16SS103J
R	1128		RS1/16SS3R9J
R	1129		RS1/16SS3R9J
R	1130		RS1/16SS102J
R	1131		RS1/16SS102J
R	1132		RS1/16SS102J
R	1133		RS1/16SS102J
R	1134		RS1/16SS102J
R	1135	Resistor Array	RAB4CQ0R0J
R	1136		RS1/16SS133J
R	1137		RS1/16SS133J
R	1138		RS1/16SS0R0J
R	1139		RS1/16SS0R0J
R	1140		RS1/16SS0R0J
R	1141		RS1/16SS0R0J
R	1142		RS1/16SS183J
R	1143		RS1/16SS273J
R	1144		RS1/16SS273J
R	1145		RS1/16SS0R0J
R	1146		RS1/16SS0R0J
R	1147		RS1/16SS0R0J
R	1148		RS1/16SS0R0J
R	1149		RS1/16SS102J
R	1150		RS1/16SS102J
R	1151		RS1/16SS102J
R	1152		RS1/16SS154J
R	1153		RS1/16SS154J
R	1154		RS1/16SS154J
R	1156		RS1/16SS224J
R	1157		RS1/16SS0R0J
R	1201		RS1/16SS203J

=====Circuit Symbol and No.		===Part Name	Part No.
R	1202		RS1/16SS102J
R	1203		RS1/16SS471J
R	1204		RS1/16SS221J
R	1205		RS1/16SS221J
R	1206		RS1/16SS473J
R	1207		RS1/16SS101J
R	1208		RS1/16SS101J
R	1209		RS1/16SS473J
R	1210		RS1/16SS222J
R	1212		RS1/16SS473J
R	1213		RS1/16SS101J
R	1215		RS1/16SS123J
R	1216		RS1/16SS473J
R	1219		RS1/16SS123J
R	1220		RS1/16SS105J
R	1221		RS1/16SS562J
R	1222		RS1/16SS273J
R	1223		RS1/16SS273J
R	1226		RS1/16SS153J
R	1227		RS1/16SS123J
R	1228		RS1/16SS472J
R	1229		RS1/16SS472J
R	1230		RS1/16SS472J
R	1231		RS1/16SS273J
R	1232		RS1/16S6801D
R	1233		RS1/16SS273J
R	1234		RS1/16SS183J
R	1235		RS1/16SS102J
R	1242	Resistor Array	RAB4CQ221J
R	1245		RS1/16SS562J
R	1246		RS1/16SS242J
R	1251		RS1/16SS473J
R	1255		RS1/16SS0R0J
R	1257		RS1/16S221J
R	1258		RS1/16SS221J
R	1259		RS1/16SS221J
R	1260		RS1/16SS221J
R	1261		RS1/16SS221J
R	1262		RS1/16SS273J
R	1263		RS1/16SS273J
R	1264		RS1/16SS104J
R	1301		RS1/16S3902D
R	1302		RS1/16S3902D
R	1303		RS1/16S3002D
R	1304		RS1/16S3902D
R	1305		RS1/16SS221J
R	1306		RS1/16SS0R0J
R	1307		RS1/16SS221J
R	1308		RS1/16S3002D
R	1310		RS1/16SS102J
R	1311		RS1/16S3902D
R	1312		RS1/16S0R0J
R	1314		RS1/16SS221J
R	1321		RS1/16SS221J
R	1323		RS1/16SS104J
R	1324		RS1/16SS473J
R	1325		RS1/16SS273J
R	1400	Resistor Array	RAB4CQ681J
R	1401	Resistor Array	RAB4CQ681J
R	1403		RS1/16SS222J
R	1405		RS1/16SS221J
R	1406		RS1/16SS103J
R	1409		RS1/16SS103J
R	1413		RS1/16SS681J
R	1416		RS1/16SS681J
R	1417		RS1/16SS103J
R	1418		RS1/16SS681J
R	1425		RS1/16SS104J
R	1426		RS1/16SS103J
R	1429		RS1/16S470J

=====Circuit Symbol and No.	Part Name	Part No.
R 1434		RS1/16SS681J
R 1436		RS1/16SS103J
R 1437		RS1/16SS103J
R 1438		RS1/16SS221J
R 1439	Resistor Array	RAB4CQ0R0J
R 1440	Resistor Array	RAB4CQ0R0J
R 1441		RS1/16SS0R0J
R 1442		RS1/16SS221J
R 1443		RS1/16SS221J
R 1500		RS1/16SS560J
R 1501		RS1/16SS560J
R 1502		RS1/16SS560J
R 1503		RS1/16SS560J
R 1504		RS1/16SS560J
R 1505		RS1/16SS560J
R 1506		RS1/16SS560J
R 1507		RS1/16SS560J
R 1508		RS1/16SS560J
R 1509		RS1/16SS560J
R 1510		RS1/16SS560J
R 1511		RS1/16SS560J
R 1513		RS1/16SS750J
R 1514		RS1/16SS622J
R 1515		RS1/16SS162J
R 1516		RS1/16SS182J
R 1517		RS1/16SS201J
R 1518		RS1/16SS201J
R 1519		RS1/16S101J
R 1520		RS1/16S101J
R 1521		RS1/16S101J
R 1523		RS1/16SS221J
R 1524		RS1/16S470J
R 1527		RS1/16SS103J
R 1529		RS1/16SS104J
R 1534		RS1/16SS221J
R 1535		RS1/16SS101J
R 1537		RS1/16SS391J
R 1538		RS1/16SS391J
R 1539	Resistor Array	RAB4CQ391J
R 1540	Resistor Array	RAB4CQ391J
R 1541	Resistor Array	RAB4CQ391J
R 1542	Resistor Array	RAB4CQ391J
R 1543	Resistor Array	RAB4CQ391J
R 1544	Resistor Array	RAB4CQ391J
R 1545	Resistor Array	RAB4CQ391J
R 1546		RS1/16SS103J
R 1548		RS1/16SS103J
R 1549		RS1/16SS560J
R 1550		RS1/16SS560J
R 1551		RS1/16SS560J
R 1552		RS1/16SS560J
R 1553		RS1/16SS560J
R 1554		RS1/16SS560J
R 1555		RS1/16SS560J
R 1556		RS1/16SS560J
R 1557		RS1/16SS560J
R 1558		RS1/16SS560J
R 1559		RS1/16SS560J
R 1560		RS1/16SS560J
R 1561		RS1/16SS560J
R 1562		RS1/16SS560J
R 1563		RS1/16SS560J
R 1564		RS1/16SS560J
R 1565		RS1/16SS560J
R 1566		RS1/16S101J
R 1567		RS1/16SS560J
R 1568		RS1/16SS560J
R 1569		RS1/16SS560J
R 1570		RS1/16SS560J
R 1571		RS1/16SS560J

=====Circuit Symbol and No.	Part Name	Part No.
R 1572		RS1/16SS560J
R 1573		RS1/16SS560J
R 1574		RS1/16SS560J
R 1575		RS1/16SS560J
R 1577		RS1/16S0R0J
R 1579		RS1/16S0R0J
R 1600		RS1/16SS271J
R 1601		RS1/16SS152J
R 1602		RS1/16SS101J
R 1604		RS1/16S3300D
R 1605		RS1/16SS122J
R 1607		RS1/16SS0R0J
R 1623		RS1/16SS102J
R 1624		RS1/16SS102J
R 1625		RS1/16SS223J
R 1626		RS1/16SS223J
R 1628		RS1/16S6R0D
R 1634		RS1/16SS472J
R 1635		RS1/16SS472J
R 1636		RS1/16SS472J
R 1637		RS1/16SS472J
R 1701		RN1/16SE1502D
R 1702		RS1/16SS221J
R 1703		RS1/16SS221J
R 1704		RS1/16SS104J
R 1705		RS1/16SS103J
R 1706		RS1/16SS103J
R 1707		RS1/16SS221J
R 1708		RS1/16SSR0J
R 1709		RS1/16SS221J
R 1710		RS1/16SS473J
R 1711		RS1/16SS330J
R 1712		RS1/16SSR0J
R 1713		RS1/16SS104J
R 1714		RS1/16SS104J
R 1715		RS1/16SS[illegible]2J
R 1716		RS1/16SS[illegible]4J
R 1717		RS1/16SS[illegible]3J
R 1718		RS1/16SS[illegible]4J
R 1719		RS1/16SS[illegible]4J
R 1720		RS1/16SS[illegible]3J
R 1721		RS1/16SS[illegible]4J
R 1722		RS1/16SS[illegible]4J
R 1723		RS1/16SS[illegible]3J
R 1724		RS1/16SS[illegible]1J
R 1725		RS1/16S0RJ
R 1726		RS1/16SS[illegible]4J
R 1727		RS1/16SS[illegible]3J
R 1728		RS1/16SS[illegible]4J
R 1729		RS1/16SS[illegible]4J
R 1730		RS1/16SS[illegible]3J
R 1733		RS1/16SS[illegible]4J
R 1734		RS1/16SS[illegible]4J
R 1735		RS1/16SS[illegible]2J
R 1736		RS1/16SS[illegible]1J
R 1737		RS1/16SS[illegible]1J
R 1738		RS1/16SS[illegible]4J
R 1739		RS1/16SS[illegible]3J
R 1740		RS1/16SS[illegible]3J
R 1741		RS1/16SS[illegible]1J
R 1742		RS1/16SS[illegible]4J
R 1743		RS1/16SS[illegible]1J
R 1744		RS1/16SS[illegible]1J
R 1745		RS1/16SS[illegible]1J
R 1746		RS1/16SS[illegible]1J
R 1747		RS1/16SS[illegible]2J
R 1748		RS1/16SS[illegible]3J
R 1749		RS1/16SS[illegible]4J
R 1750		RS1/16SS[illegible]2J
R 1751		RS1/16SS[illegible]3J

=====Circuit Symbol and No.	===Part Name	Part No.
R	1752	RS1/16SS104J
R	1753	RS1/16SS104J
R	1754	RS1/16SS104J
R	1755	RS1/16SS104J
R	1756	RS1/16SS473J
R	1757	RS1/16SS472J
R	1758	RS1/16SS104J
R	1762	RS1/16SS104J
R	1763	RS1/16SS104J
R	1764	RS1/16SS104J
R	1766	RS1/16SS104J
R	1771	RS1/16SS104J
R	1772	RS1/16SS104J
R	1773	RS1/16SS104J
R	1774	RS1/16SS473J
R	1775	RS1/16SS221J
R	1776	RS1/16SS104J
R	1777	RS1/16SS104J
R	1778	RS1/16SS0R0J
R	1801	RS1/16S3902D
R	1802	RS1/16S3302D
R	1808	RS1/16SS102J
R	1809	RS1/16SS102J
R	1812	RS1/16S0R0J
R	1813	RS1/16S0R0J
R	1814	RS1/16S0R0J
R	1815	RS1/16S0R0J

CAPACITORS

C	1100	CKSRYB105K10
C	1101	CKSRYB473K25
C	1102	CKSSYB103K16
C	1103	CSZSR101M6R3
C	1104	CKSSYB104K10
C	1105	CKSSYB104K10
C	1106	CKSRYB473K25
C	1107	CKSSYB103K16
C	1108	CSZSR101M6R3
C	1109	CKSSYB104K10
C	1110	CKSRYB154K10
C	1111	CCSSCH221J25
C	1114	CCSSCH330J50
C	1115	CKSSYB104K10
C	1116	CCSSCH221J25
C	1117	CKSRYB105K10
C	1118	CKSSYB104K10
C	1119	CKSSYB104K10
C	1120	CKSSYB104K10
C	1121	CKSSYB104K10
C	1122	CSZSC470M16
C	1123	CKSRYB273K25
C	1124	CKSSYB104K10
C	1125	CKSSYB104K10
C	1126	CKSSYB473K10
C	1127	CCSRCH561J50
C	1128	CKSSYB104K10
C	1129	CKSSYB104K10
C	1130	CCSRCH102J50
C	1131	CCSSCH120J50
C	1133	CCSRCH561J50
C	1134	CKSSYB104K10
C	1136	CCSSCH101J50
C	1137	CCSSCH101J50
C	1138	CCSSCH101J50
C	1139	CKSSYB104K10
C	1140	CKSSYB103K16
C	1141	CKSSYB104K10
C	1142	CKSSYB104K10
C	1143	CKSSYB473K10

=====Circuit Symbol and No.	===Part Name	Part No.
C	1144	CKSSYB473K10
C	1145	CKSSYB103K16
C	1146	CKSSYB473K10
C	1148	CKSSYB103K16
C	1201	CKSRYB105K10
C	1202	CCSSCH101J50
C	1203	CKSRYB474K10
C	1204	CCSRCH561J50
C	1205	CCSRCH331J50
C	1206	CKSRYB105K10
C	1207	CKSSYB104K10
C	1208	CCSRCH471J50
C	1209	CCSRCH391J50
C	1210	CKSRYB105K10
C	1211	CCSSCH101J50
C	1212	CKSSYB104K10
C	1213	CKSRYB474K10
C	1214	CCSRCH102J50
C	1215	CCSRCH102J50
C	1216	CKSSYB562K25
C	1217	CCSRCH102J50
C	1218	CKSSYB104K10
C	1219	CKSSYB104K10
C	1220	CKSRYB474K10
C	1221	CCSSCH470J50
C	1222	CKSRYB183K25
C	1223	CCSRCH102J50
C	1224	CKSSYB104K10
C	1225	CKSSYB104K10
C	1227	CKSSYB103K16
C	1228	CKSSYB104K10
C	1229	CCSRCH102J50
C	1230	CKSSYB103K16
C	1231	CKSSYB104K10
C	1232	CKSRYB154K10
C	1233	CKSSYB104K10
C	1234	CKSSYB104K10
C	1235	CKSSYB104K10
C	1236	CKSSYB471K50
C	1241	CKSSYB103K16
C	1242	CKSSYB103K16
C	1243	CKSSYB104K10
C	1300	CKSSYB103K16
C	1301	CKSSYB103K16
C	1304	CKSRYB104K16
C	1305	CEV101M16
C	1308	CKSSYB104K10
C	1400	CKSSYB104K10
C	1401	CKSSYB104K10
C	1402	CKSSYB104K10
C	1403	CKSSYB104K10
C	1404	CKSSYB104K10
C	1405	CKSSYB104K10
C	1406	CKSSYB104K10
C	1407	CKSSYB104K10
C	1408	CKSSYB104K10
C	1409	CKSSYB104K10
C	1410	CKSSYB104K10
C	1411	CKSSYB104K10
C	1412	CKSSYB104K10
C	1413	CKSSYB104K10
C	1414	CKSRYB105K10
C	1415	CKSSYB104K10
C	1416	CKSSYB104K10
C	1418	CKSSYB471K50
C	1421	CKSSYB104K10
C	1423	CKSSYB104K10
C	1500	CKSSYB104K10
C	1501	CKSSYB104K10
C	1502	CKSSYB104K10

=====Circuit Symbol and No.	Part Name	Part No.
C 1503		CKSSYB104K10
C 1504		CKSSYB104K10
C 1505		CKSSYB104K10
C 1506		CSZSC101M10
C 1507		CKSSYB104K10
C 1508		CKSSYB104K10
C 1509		CKSSYB104K10
C 1510		CKSSYB104K10
C 1511		CKSSYB104K10
C 1512		CKSSYB104K10
C 1513		CKSSYB104K10
C 1514		CKSSYB104K10
C 1515		CKSSYB104K10
C 1516		CKSSYB104K10
C 1517		CKSSYB104K10
C 1518		CKSSYB104K10
C 1519		CKSSYB104K10
C 1520		CKSSYB104K10
C 1521		CKSSYB104K10
C 1522		CKSSYB104K10
C 1523		CKSSYB104K10
C 1524		CKSSYB104K10
C 1525		CKSSYB104K10
C 1526		CKSSYB104K10
C 1527		CKSSYB104K10
C 1528		CKSSYB104K10
C 1529		CKSSYB471K50
C 1530		CKSSYB104K10
C 1532		CKSSYB104K10
C 1534		CCSSCH150J50
C 1535		CKSSYB104K10
C 1536		CKSSYB104K10
C 1537		CCSSCH150J50
C 1538		CKSSYB104K10
C 1539		CKSSYB104K10
C 1540		CKSRYB105K10
C 1541		CKSRYB105K10
C 1542		CKSSYB104K10
C 1543		CKSSYB104K10
C 1544		CKSSYB104K10
C 1545		CKSSYB104K10
C 1546		CKSSYB104K10
C 1547		CKSSYB104K10
C 1548		CKSSYB104K10
C 1549		CKSSYB104K10
C 1550		CKSSYB104K10
C 1551		CKSSYB104K10
C 1552		CKSSYB104K10
C 1553		CKSSYB104K10
C 1554		CKSSYB104K10
C 1555		CKSSYB104K10
C 1556		CKSSYB104K10
C 1570		CSZSR101M6R3
C 1571		CSZSR101M6R3
C 1572		CEV101M10
C 1573		CEV101M10
C 1574		CSZSC470M10
C 1575		CSZSC470M10
C 1576		CKSSYB104K10
C 1577		CKSSYB104K10
C 1578		CKSSYB104K10
C 1579		CKSSYB104K10
C 1600		CKSRYB104K16
C 1601		CSZSR4R7M16
C 1602		CKSSYB102K50
C 1608		CSZSR4R7M16
C 1609		CSZSR4R7M16
C 1634	10μF/10V	CCH1349
C 1635	10μF/10V	CCH1349
C 1636		CKSSYB104K10

=====Circuit Symbol and No.	Part Name	Part No.
C 1637		CKSSYB104K10
C 1700		CKSSYB104K10
C 1701		CKSSYB104K10
C 1702		CKSRYB105K10
C 1703		CKSRYB105K10
C 1704		CKSSYB104K10
C 1705		CKSRYB105K10
C 1706		CKSSYB104K10
C 1707		CKSRYB105K10
C 1708		CKSSYB104K10
C 1709		CKSSYB104K10
C 1710		CKSSYB104K10
C 1711		CKSSYB104K10
C 1712		CKSSYB103K16
C 1713		CKSSYB104K10
C 1714		CKSYB106K6R3
C 1715		CKSSYB104K10
C 1716		CKSSYB104K10
C 1717		CKSSYB104K10
C 1719		CKSSYB471K50
C 1720		CKSSYB103K16
C 1721		CKSSYB104K10
C 1722		CKSSYB103K16
C 1727		CCSRCH180J50
C 1728		CCSRCH180J50
C 1800		CKSRYB474K10
C 1801		CKSRYB474K10
C 1802		CKSRYB474K10
C 1803		CKSRYB474K10
C 1804	22μF/6.3V	CCH1300
C 1805	22μF/6.3V	CCH1300
C 1808		CSZSC101M10
C 1809		CCSRCH102J50
C 1810		CCSRCH102J50
C 1811		CSZSR101M6R3
C 1812		CSZSC101M10

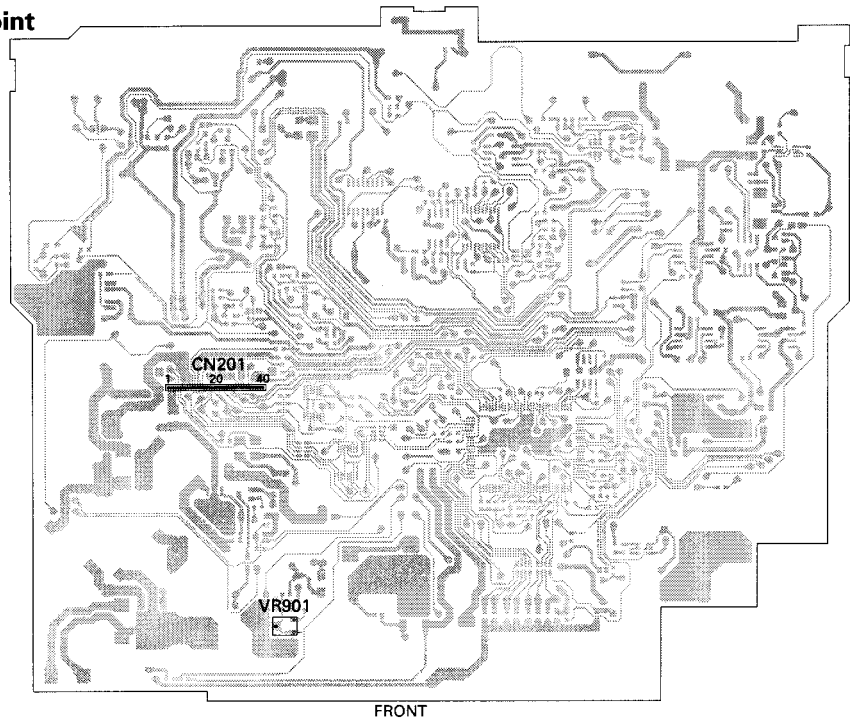
Miscellaneous Parts List

		Pickup Unit(Service)(DP4)	CXX1530
M	1	Motor Unit(LOADING)	CXB5960
M	2	Motor Unit(CARRIAGE)	CXB5955
M	3	Motor(SPINDLE)	CXB6218

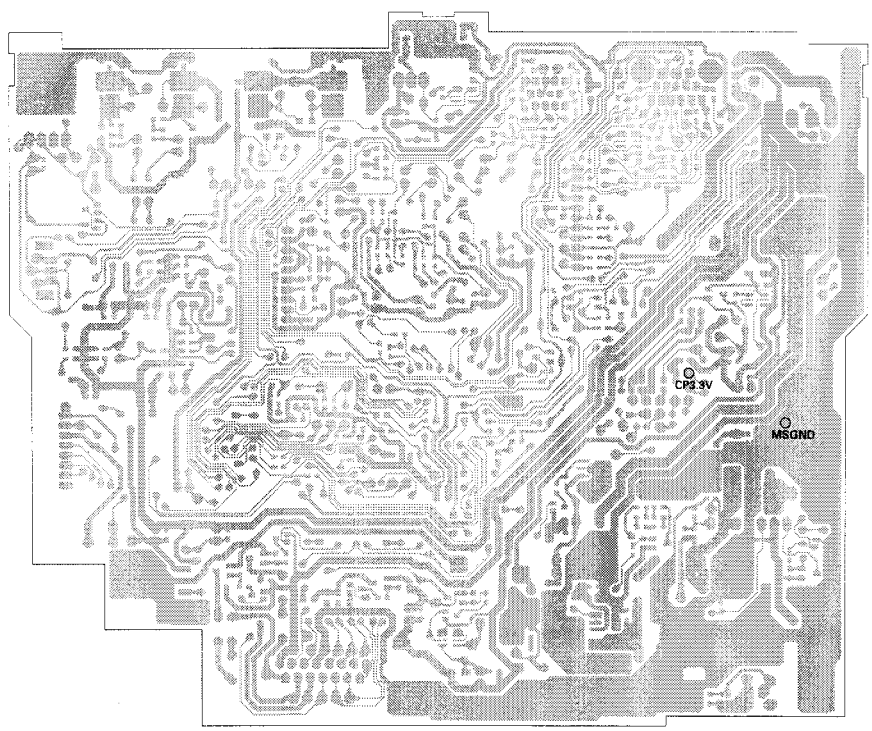
6. ADJUSTMENT

6.1 AUDIO CONTROL PCB SECTION ADJUSTMENT

● **Adjustment Point**



● **Test Point**



3.3V POWER SUPPLY ADJUSTMENT

DVD Mechanism Module : Play

No.	Test Point	Adjustment Point	Adjustment Method
1	CP3.3V, MSGND	VR901	DC V Meter : 3.41V±10mV

6.2 DVD ADJUSTMENT

1) Precautions

This product uses 5V and 3.3V as standard voltages. The electrical potential that is the reference for signals, is not GND, but VREF (approximately 2.2V) and VHALF (approximately 1.65V).

During product adjustments, if the reference voltage is mistakenly taken as GND, and a grounding contact is made, not only would it be impossible to measure the accurate electrical potential, but also the servo motor would malfunction, resulting in the application of a strong impact on the pick up. The following precautionary measures should be strictly adhered to, in order to avoid such problems.

The reference voltage and GND should not be confused when using the minus probe of a measurement device. When an oscilloscope is being used special care should be taken to make sure that the reference voltage is not connected to the probe of ch1 (on the minus side), while the probe of ch2 (on the minus side), is connected to GND. Further, since the body frame of most measurement devices have the same electrical potential as the minus side of the probe, the body frame of the measurement device should be set to floating ground.

If the reference voltage is connected to GND by mistake, turn the regulator OFF immediately, or turn the power OFF.

- Remove the filters and wires used for measurements only after the regulator has been turned OFF.
- After the power supply is turned on, regulator ON the following adjustment and measurement are promptly done.
- Whenever the product is in the test mode, the software will not take any protective action. For this reason, special care should be taken to make sure that no mechanical or electrical shock could be applied to the product when taking measurements in the test mode.
- Whenever the EJECT key is pressed to eject the disk, no other keys, other than the EJECT key, should be pressed until the disk eject action has been completed.
- Press the EJECT key only after the disk has stopped completely.
- If the product hangs up turn the power OFF immediately.
- Laser didoes may be damaged, if the volume switch for the laser power adjustment of the pick up unit, is turned.

- Please connect with the head unit of the IP BUS conformity and do the test mode.

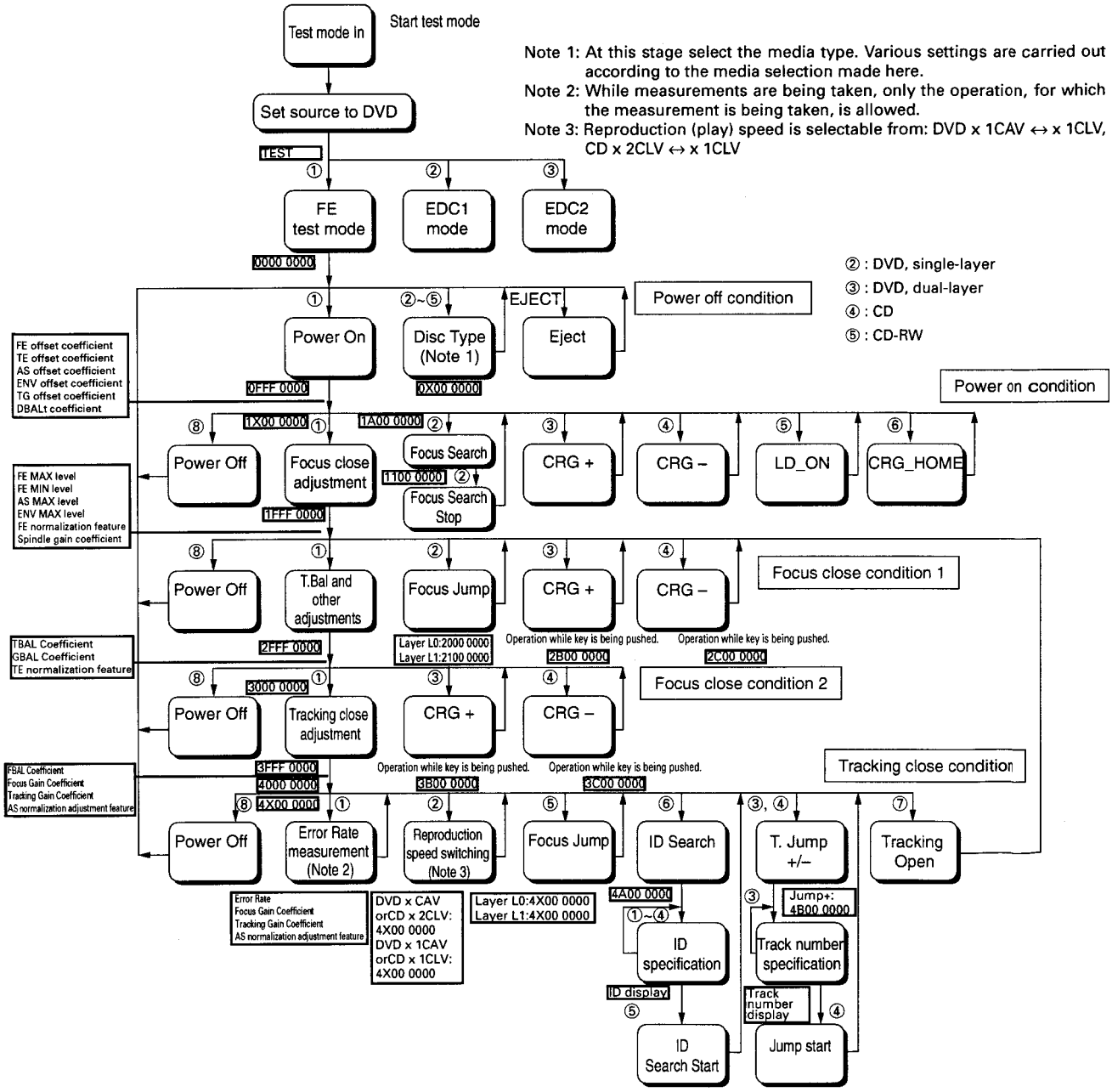
Attention)

There is a head unit that the test mode does not operate.

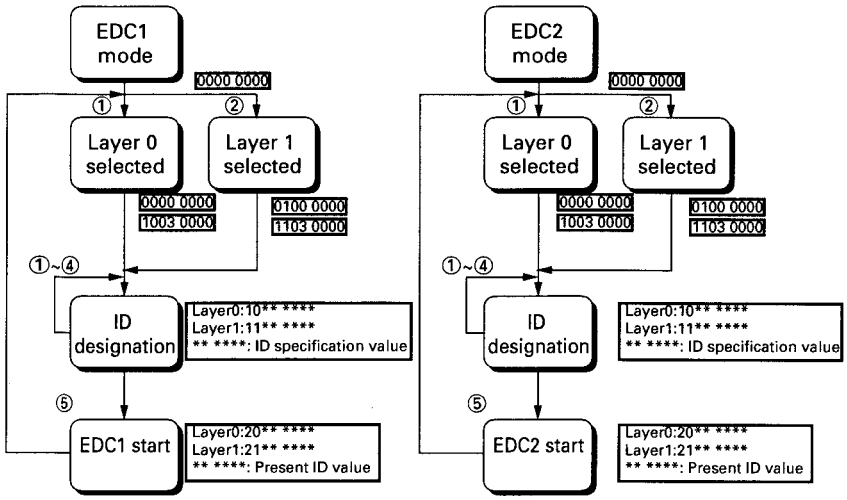
- Test mode starting procedure
  Reset while pressing the 4 and 6 keys together.

Please use the " remote control unit of the product accessory" after the test mode starts.

● Front-End test mode flow chart



Note 1: At this stage select the media type. Various settings are carried out according to the media selection made here.
Note 2: While measurements are being taken, only the operation, for which the measurement is being taken, is allowed.
Note 3: Reproduction (play) speed is selectable from: DVD x 1CAV ↔ x 1CLV, CD x 2CLV ↔ x 1CLV



F-close and F-search cannot be executed, unless LD-ON is set.
[If F-close isn't executed within 9 seconds after LD-ON,
it switches to LD-OFF automatically. And even if F-search is executed
within 9 seconds after LD-ON, it also switches to LD-OFF.]

The track number designation is selected from the track numbers already prepared for selection.

Switching to cyclic operation is made at step ③, and the decision is finalized (entered) in step ④.

For CD: Tracks 1, 4, 10, 11 and 32.

For DVD: Tracks 1, 4, 10, 11, 32, 64 and 100.

Method for designating an ID address:

• A number of digits are determined through commands ① and ②. Numerical UP/DOWN operations are performed through commands ③ and ④. The decision is finalized (entered) with command ⑤.

OSD display

Error Code List

Error status from DVD micurocomputer	Contents	Display
0X50	Mecha. error	No dislay
0X40	No disc	No dislay
0X30	The temperature is abnormal	Thermal Protection in Motion
0X20	Read error	Error-02-XX
0XE2	Non-playable disc	NON-PLAYABLE DISC
0X90	Drrerent region disc	DFFERENT REGION DISC
0XFF	Undefined error	Error-FF

Error code of read error(Part of XX)

Error Code	Contents	Display
0X99	Data cannot read	Please condirm the disc
0X80	The address cannot be found	Please condirm the disc
0X90	Focus error	Please condirm the disc
0X91	Spindle lock NG	DVD is stopping because mechanism detected abnormality
0X92	Carrige home NG	DVD is stopping because mechanism detected abnormality
0X93	FOK error	Please condirm the disc
0X94	ID/Subcode cannot be read	Please condirm the disc
0X95	High spindle rotation	Please condirm the disc
0X96	Row spindle rotation	DVD is stopping because mechanism detected abnormality
0X98	TOC cannot be found	Please condirm the disc
0X9A	AV chip error	DVD is stopping because mechanism detected abnormality
0X9B	RecaveryNG(BE)	DVD is stopping because mechanism detected abnormality

● Skew adjustment

If any of the following replacements have been performed on the system, adjustments for pick up, must be conducted:

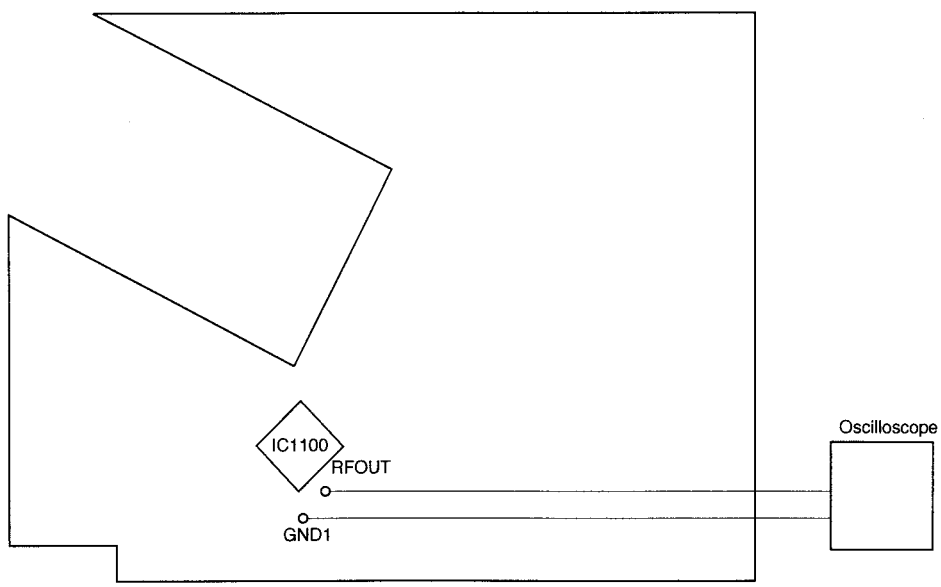
1. Pick up unit replacement
2. Spindle motor replacement
3. Carriage chassis replacement
4. Pick up unit main shaft replacement
5. Pick up unit sub-shaft replacement

Measurement device and tools : Oscilloscope
Allen key wrench
40-pin flexible extension
Adhesive material(GEM1033)
Screw rock(GYL1001)

Disk used : GGV1018
Measurement reference : GND1
Measurement point : RFOUT

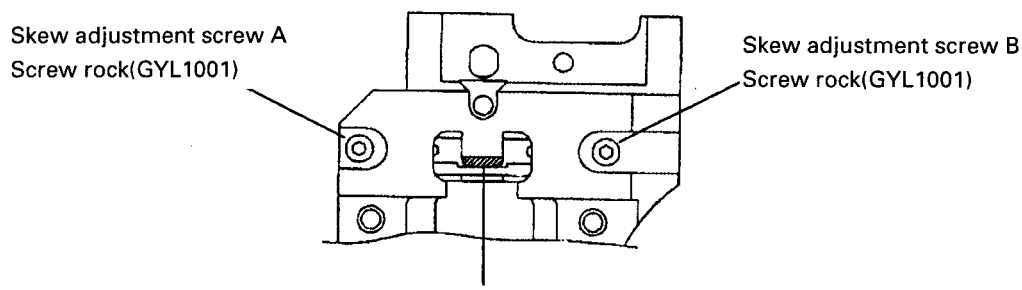
Skew adjustment connection diagram

• DVD core unit V

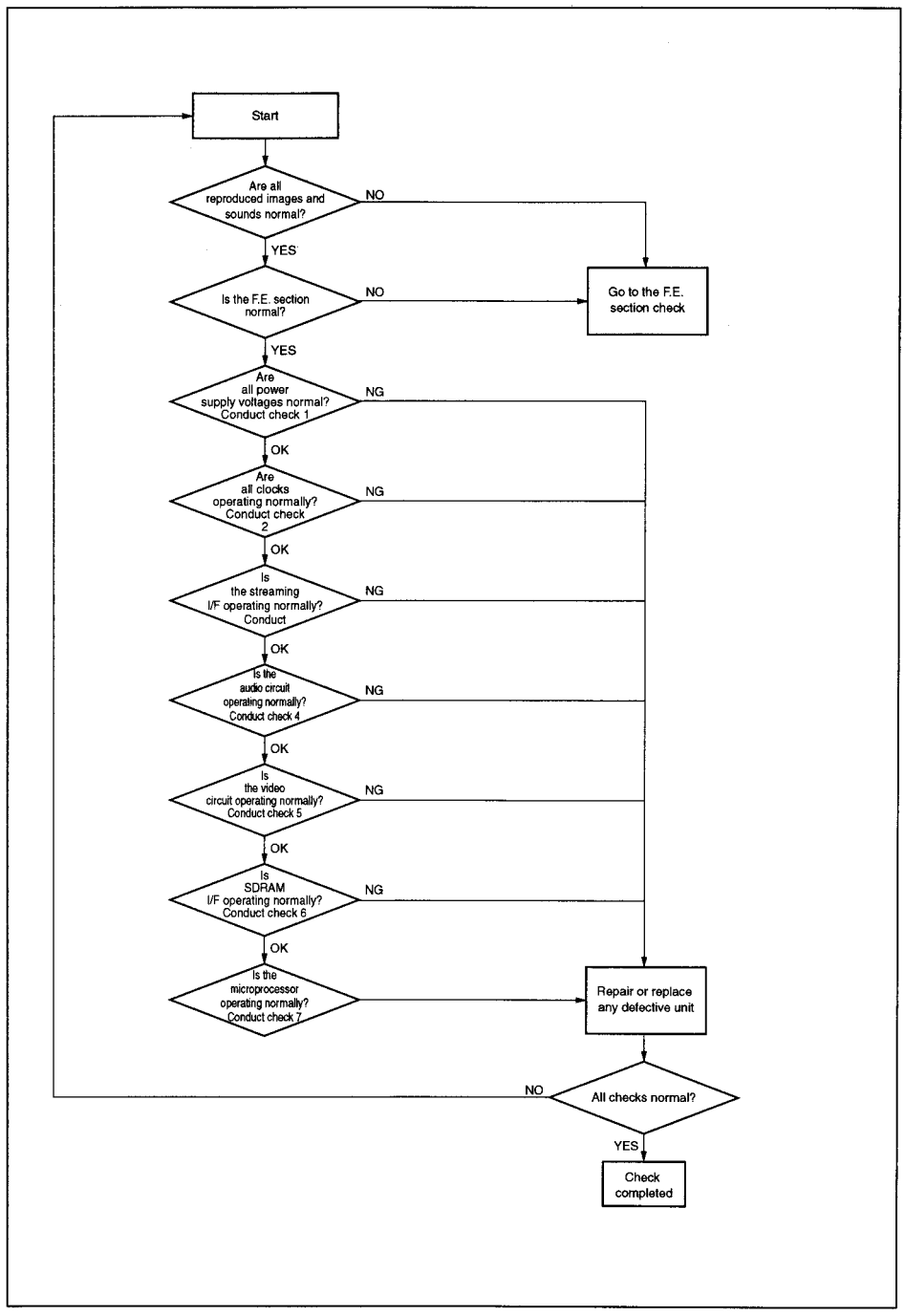


Symptoms that can occur if proper adjustments are not made: Error rate reaches 10^{-3} (10^{-4} or less under normal conditions).
The RF jitter becomes more pronounced - the RF waveform becomes deformed.
Retraction of the tracking and the servo motor, become unstable.
Cautions for performing adjustments: Do not look directly into the laser beam for any prolonged periods of time.
Procedure:
1. Replace the cable, connecting the product's main unit and the DVD mechanical module, with a 40-pin extended flexible cable (GGD1170), and turn the DVD mechanical module upside down, in order to proceed with pick-up unit adjustments.
2. Remove adhesive materials from the pick-up unit, using tweezers.
(Note) Make sure that adhesive material fragments are not scattered while removing the adhesive from the unit. Be also very careful not to exert excessive force on the actuator.
3. Connect the unit to an oscilloscope, referring to the connection diagram.
4. Turn the product power ON, and load the disk for adjustments (GGV1018).
5. Set the disk type to single-layer DVD in the front-end test mode, turn the power ON and then move the pick-up to the middle radius.
6. LD ON.
7. Close in the focus(Do not carry out 'T.Bal adjustment' and 'Tracking close'.)
8. Maximize the level by slightly turning the skew adjustment screw A, while looking at the RF waveform level on the oscilloscope.
Next, maximize the level by turning the skew adjustment screw B, slightly. Repeat this procedure three times and adjust the unit to attain a maximum level.
9. Turn the power OFF in the test mode, and eject the disk after verifying that it has stopped spinning.
10. Apply adhesive and screw lock materials, to the locations specified in the pick-up diagram (shown below).
Apply the adhesive material to secure the resin components on the pick-up chassis.
Apply the screw lock material to secure the screws on the pick-up chassis.
Do not apply any of these materials to the pick-up section or mechanical sections, which are not specified.
Keep the unit away from vibration or shock until the materials securely fix the components and screws in place.

PU diagram



● Back end section check flow chart



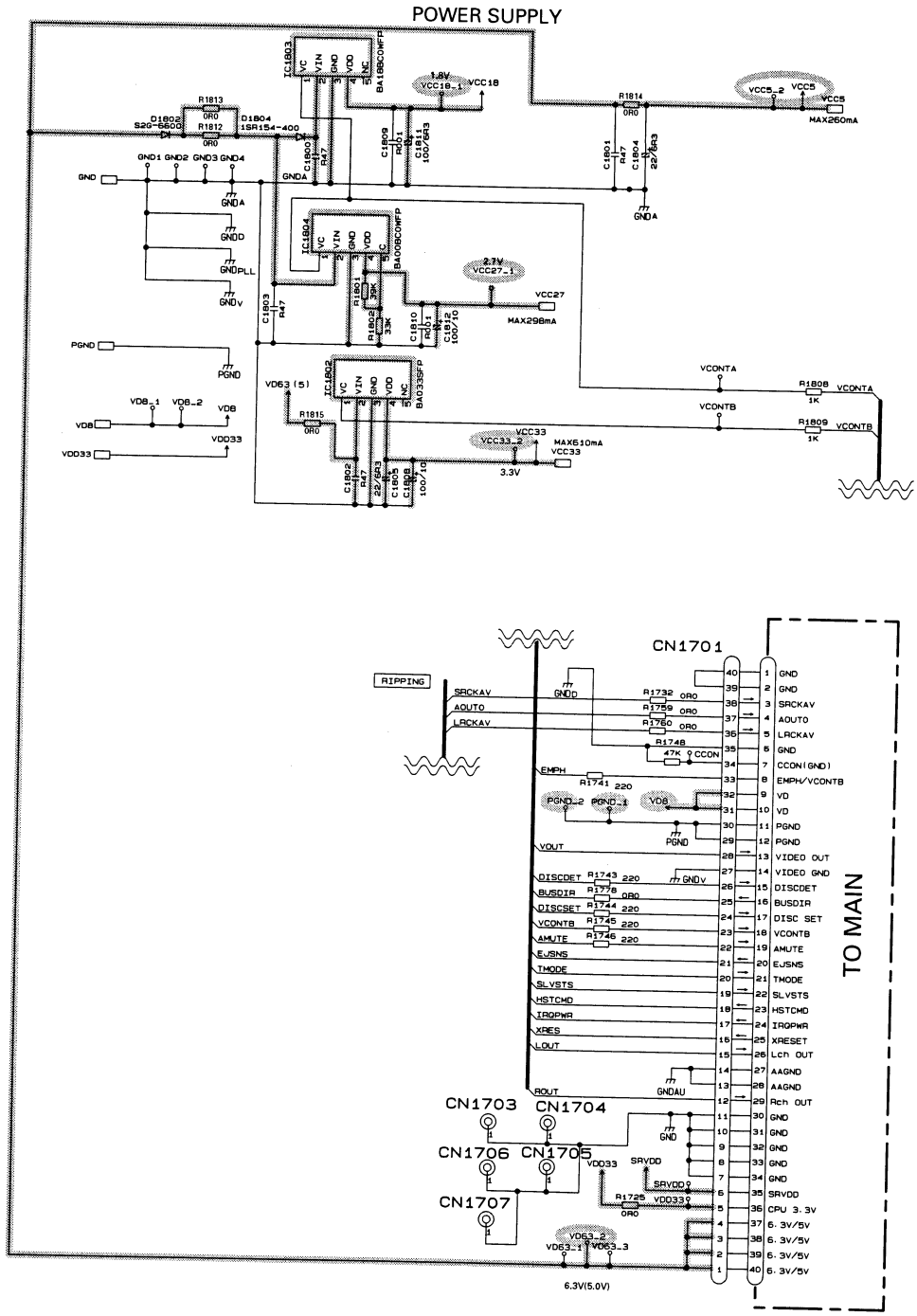
Check 1: Are all power supply voltages normal?

Reproduce DVD-REF-A1(GGV1018) Title 1.

Verify the voltage of the sensing pin.

If results are not satisfactory, check to see if there are any problems with the resin flux cored solder, parts and components, in the vicinity of IC1801 through 1804 (the section marked ① in the circuit diagram).

NO.	Verification location	Rated value	Unit
1	VD8-PGND	8±0.3	V
2	VD63-GND	5±0.25	V
3	VDD33-GND	3.3±0.3	V
4	SRVDD-GND	3.3±0.3	V
5	VCC5-GND	5±0.25	V
6	VCC33-GND	3.3±0.17	V
7	VCC27-GND	2.73±0.07	V
8	VCC18-GND	1.8±0.04	V



Schematic diagram ①

Check 2: Are all clocks operating normally?

Reproduce DVD-REF-A1(GGV1018) Title 1.

Verify the circuit described in Figure ②.

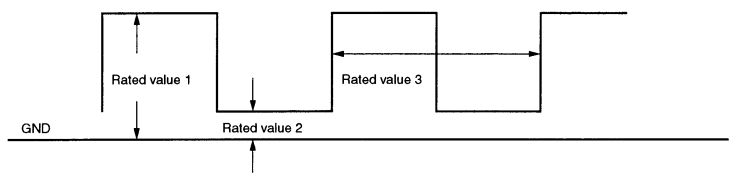
This check is the same for all DVD-V compatible modules.

Checks are to be conducted with a GND reference.

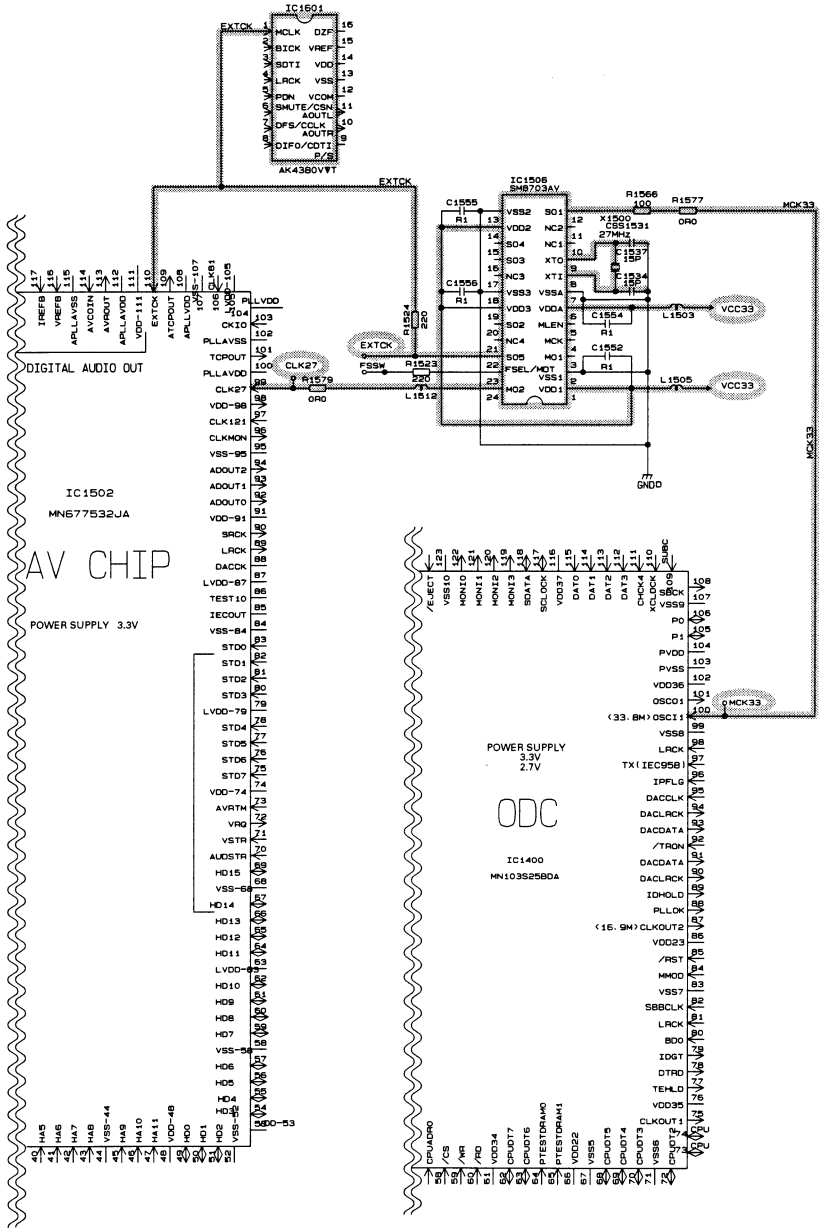
If locations listed under "verification location 2", can be verified, there will be no need to perform verifications for the locations listed under "verification location 1."

If the result is not satisfactory, check to see if there are any problems with the resin flux cored solder, parts and components, in the vicinity of IC1506 (the section marked ② in the circuit diagram).

NO.	Verification location 1 (contact measurements)	Verification location 2	Media	Rated value 1	Rated value 2	Rated value 3
1	CLK27	IC1502 99pin	ALL	2.65V~VCC33	GND~0.65V	27MHz±50ppm
2	EXTCK	IC1502 110pin IC1601 1pin	DVD	2.65V~VCC33	GND~0.65V	36.8640MHz± 100ppm
3	EXTCK	IC1502 110pin IC1601 1pin	CD	2.65V~VCC33	GND~0.65V	33.8688MHz± 100ppm
4	MCK33	IC1400 100pin	ALL	2.33~VCC33	GND~0.99V	33.8688MHz±100ppm



Clock rated values



Schematic diagram ②

Check 3: Is the streaming I/F operating normally?

Reproduce DVD-REF-A1(GGV1018) Title 1.

Verify the circuit described in Figure ③.

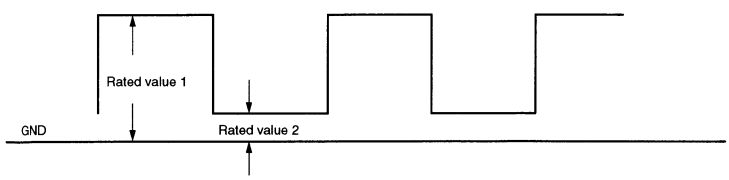
This check is the same for all DVD-V compatible modules.

Checks are to be conducted with a GND reference.

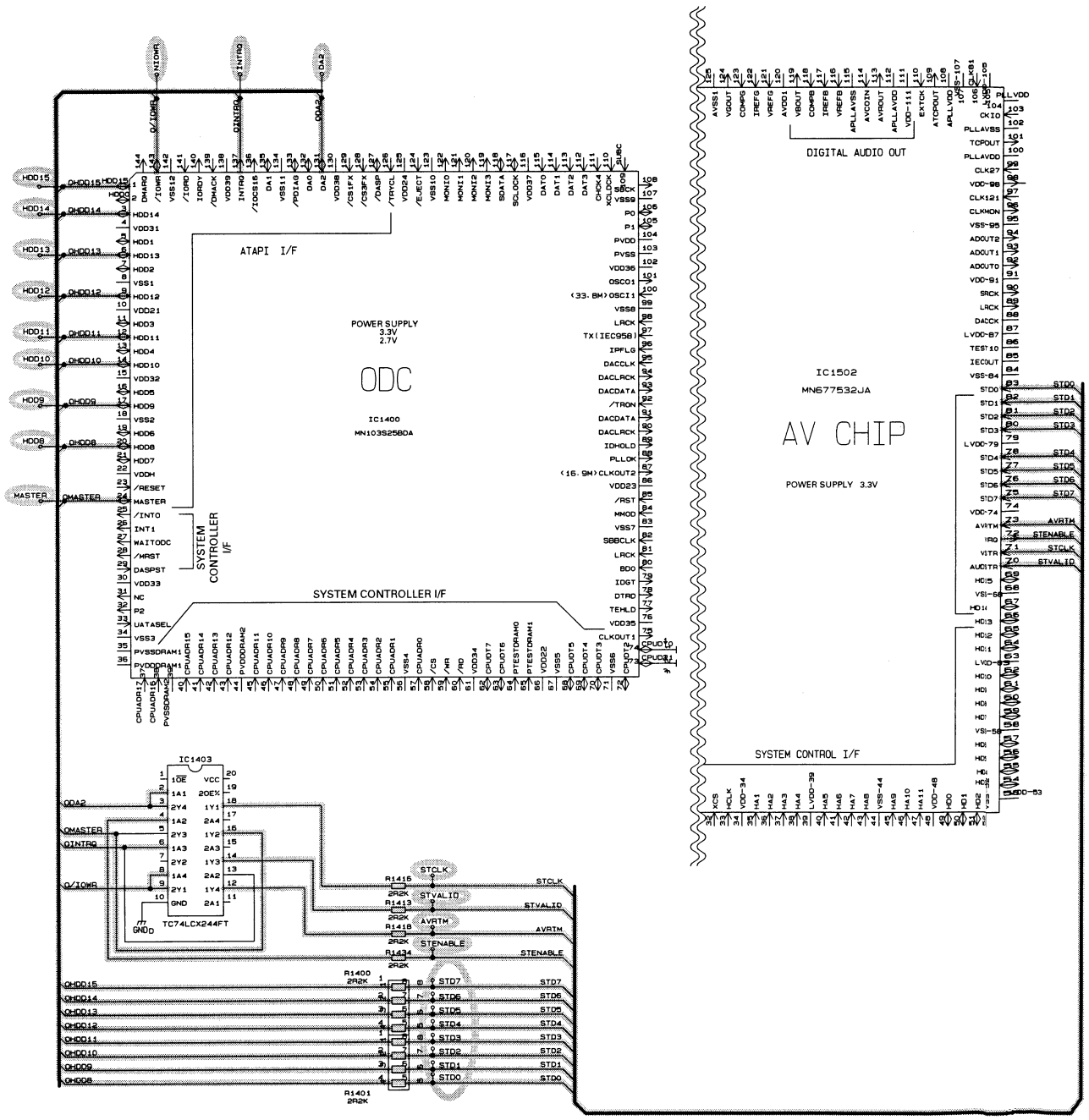
If the locations listed under "verification location 2" can be verified, then there is no need to conduct verifications for the locations listed under "verification location 1."

If the result is not satisfactory, check to see if there are any problems with the resin flux cored solder, parts and components, in areas where a problem occurs, for the overall sequence of "output " input" of the checked location.

NO.	Verification location 1 (contact measurements)	Verification location 2	Verification Media	Rated value 1	Rated value 2	Reference waveform	Others
1	STD0	IC1502 83pin	DVD	2V~VCC33	GND~0.8V	Waveform 1	Line name OHDD6 at R1401
2	STD1	IC1502 82pin	DVD	2V~VCC33	GND~0.8V	Waveform 1	Line name OHDD9 at R1401
3	STD2	IC1502 81pin	DVD	2V~VCC33	GND~0.8V	Waveform 1	Line name OHDD10 at R1401
4	STD3	IC1502 80pin	DVD	2V~VCC33	GND~0.8V	Waveform 1	Line name OHDD11 at R1401
5	STD4	IC1502 78pin	DVD	2V~VCC33	GND~0.8V	Waveform 1	Line name OHDD12 at R1401
6	STD5	IC1502 77pin	DVD	2V~VCC33	GND~0.8V	Waveform 1	Line name OHDD13 at R1401
7	STD6	IC1502 76pin	DVD	2V~VCC33	GND~0.8V	Waveform 1	Line name OHDD14 at R1401
8	STD7	IC1502 75pin	DVD	2V~VCC33	GND~0.8V	Waveform 1	Line name OHDD15 at R1401
9	AVRTM	IC1502 73pin	DVD	2V~VCC33	GND~0.8V	Waveform 2	Line name O/IOWR
10	STCLK	IC1502 71pin	DVD	2V~VCC33	GND~0.8V	Waveform 2	Line name ODA2
11	STVALID	IC1502 70pin	DVD	2V~VCC33	GND~0.8V	Waveform 2	Line name O/INTRO
12	MASTER	IC1400 24pin	DVD	2V~VCC33	GND~0.8V	Waveform 2	Line name STENABLE



Streaming I/F rated value

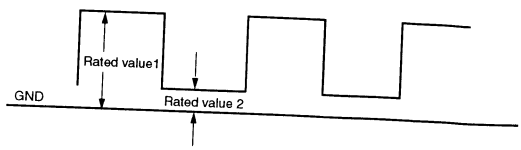


Schematic diagram ③

Check 4: Is the audio circuit operating normally?

Reproduce DVD-REF-A1(GGV1018) Title 2 Chapter (48k/16-bit/1 kHz/0dB).
This check is the same for all DVD-V compatible modules.
Checks are to be conducted using GNDAU1 (sensing pins) as a reference.
If the locations, listed under "verification location 2", can be verified, there is no need to conduct verifications for the locations listed under "verification location 1."
If the result is not satisfactory, check to see if there are any problems with the resin flux cored solder, parts and components, in the vicinity of the main components (the section marked ④ in the circuit diagram circuit diagram).

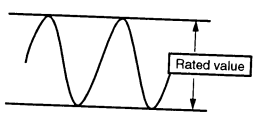
NO.	Verification location 1	Verification location 2	Rated value 1	Rated value 2	Reference waveform
1	AOUT0	IC1601 pin-3 For CXK6113, include also CN1701 pin-37	2.2V and over	0.8V and lower	Waveform 3
2	SRCKAV	IC1601 pin-2 For CXK6113, include also CN1701 pin-38	2.2V and over	0.8V and lower	Waveform 3
4	LRCKAV	IC1701 pin-4 CXK6113, include also CN1701 pin-36	2.2V and over	0.8V and lower	Waveform 3



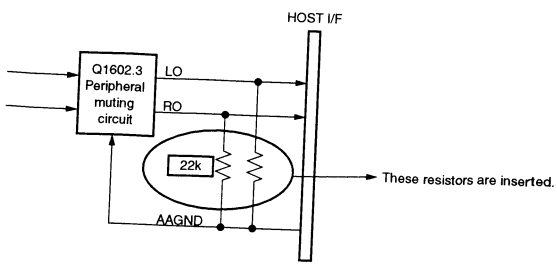
Three serial output rated values

Checks are conducted with the measurement circuit below.

NO.	Verification location 1	Verification location 2	Rated value	Reference waveform
4	LO	CN1701 15pin	1120±150mV	Waveform 4
5	RO	CN1702 12pin	1120±150mV	Waveform 4

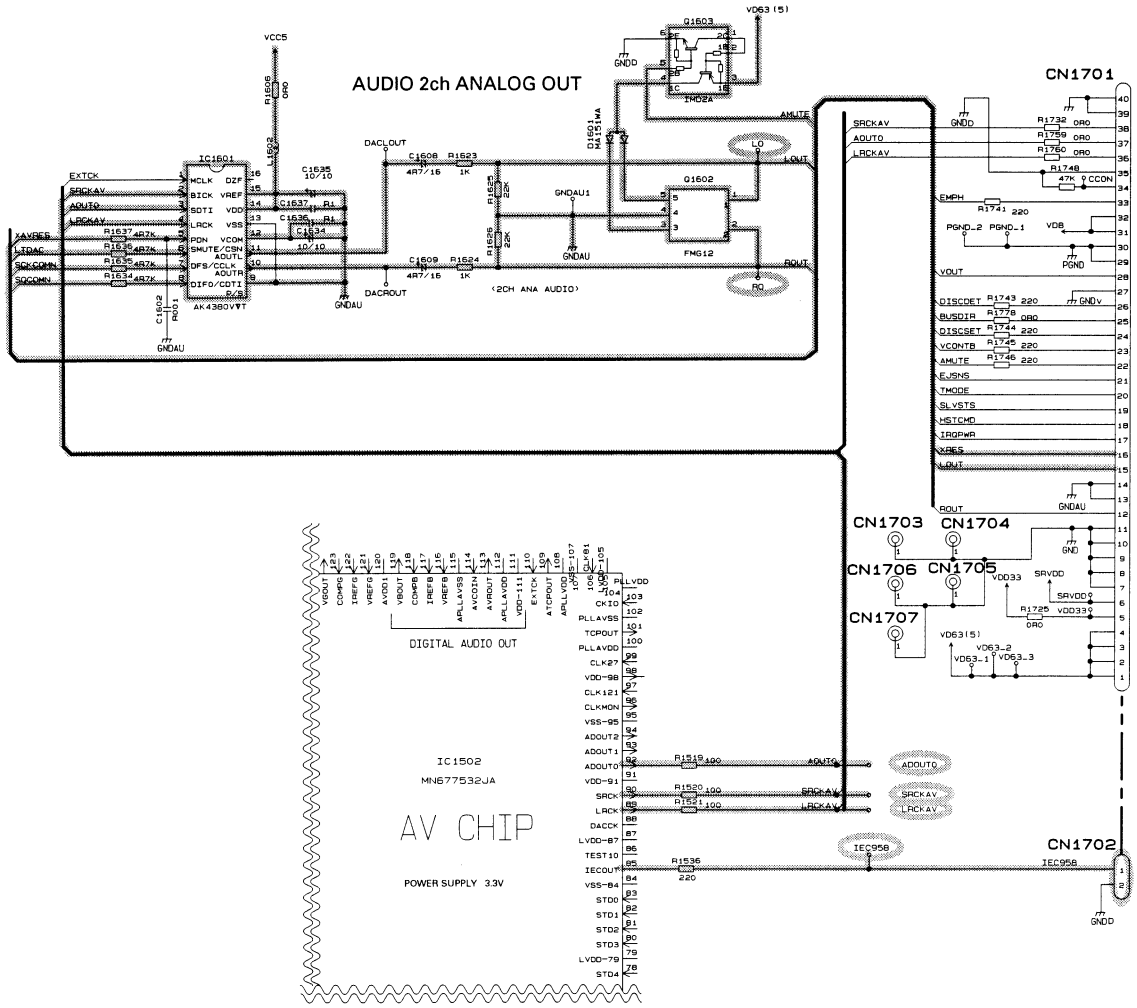


Analog audio outputs (LO and RO) rated values



LO and RO output measurement circuit

NO.	Verification location 1	Verification location 2	Rated value 1	Rated value 2	Reference waveform
6	IEC958	CN1702 2pin	2.2V and over	0.8V and lower	Waveform 5



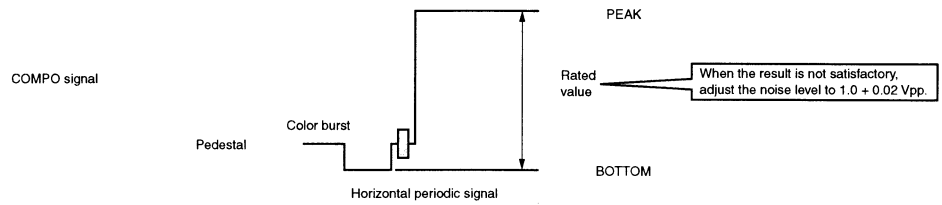
Schematic diagram ④

Check 5: Is the video circuit operated normally?

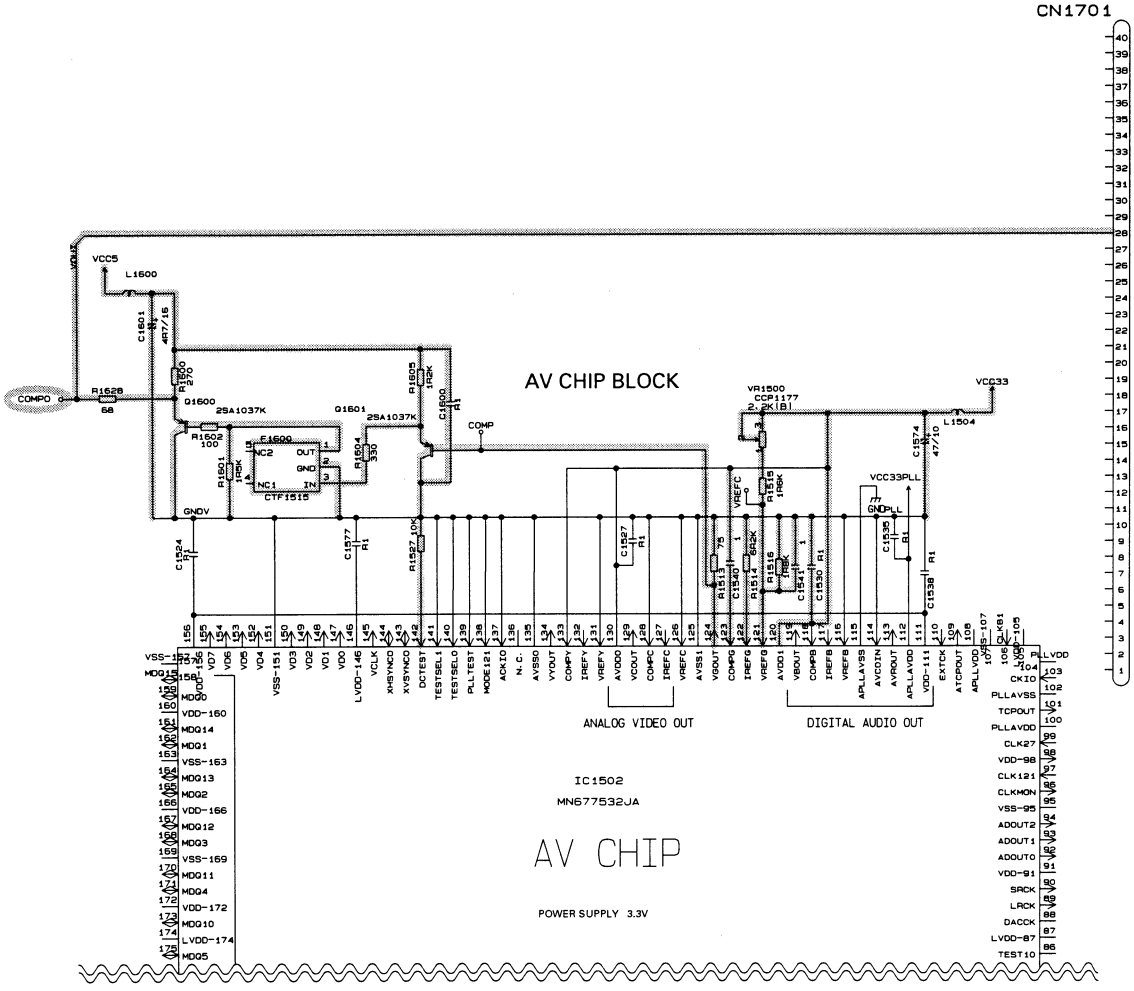
Reproduce DVD-REF-A1(GGV1018) Title 2 Chapters (White 100IRE).
Monitor the output with the oscilloscope, by setting the COMPO signal to a GND reference.
Set the Trigger mode to the TV trigger, and the Trigger line to line-150.

NO.	Verification location (sensing pin)	Rated value	Reference waveform
1	COMPO	1.0±0.02Vpp	Waveform 6

If the result is not satisfactory, check to see if there are any problems with resin flux cored solder, parts and components, in the vicinity of line-150 (the section marked ⑤ in the circuit diagram) and peripheral components



Composite signal 100% output waveform

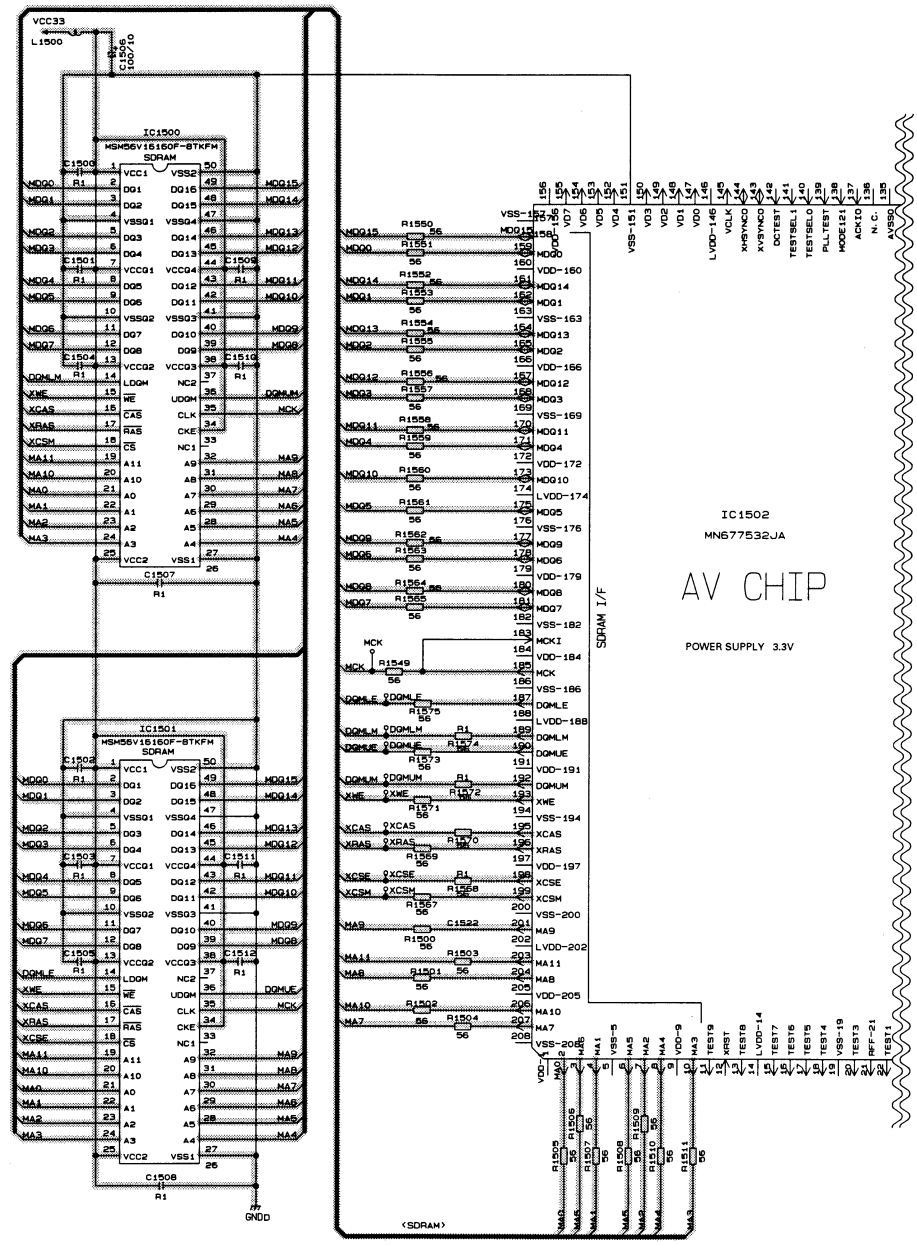


Schematic diag ram ⑤

Check 6: Is SDRAM I/F operating normally?

Reproduce DVD-REF-A1(GGV1018) Title 1.
Verify the circuit described in Figure ⑥.
This check is the same for all DVD-V compatible modules.
Check the conductivity of both the "Verification location 1" and the "Verification location2."
If the result is not satisfactory, check to see if there are any problems with the resin flux cored solder, parts and components, in areas where a problem occurs, for the overall sequence of "output " input" of the checked location.

NO.	Signal name	Verification location 1	Verification location 2	Rated value	Others
1	MA0	IC1500/1501 21pin	IC1502 2pin	56Ω ± 5%	Same for both IC1500 and IC1501.
2	MA1	IC1500/1501 22pin	IC1502 4pin	56Ω ± 5%	Same for both IC1500 and IC1501.
3	MA2	IC1500/1501 23pin	IC1502 7pin	56Ω ± 5%	Same for both IC1500 and IC1501.
4	MA3	IC1500/1501 24pin	IC1502 10pin	56Ω ± 5%	Same for both IC1500 and IC1501.
5	MA4	IC1500/1501 27pin	IC1502 8pin	56Ω ± 5%	Same for both IC1500 and IC1501.
6	MA5	IC1500/1501 28pin	IC1502 6pin	56Ω ± 5%	Same for both IC1500 and IC1501.
7	MA6	IC1500/1501 29pin	IC1502 3pin	56Ω ± 5%	Same for both IC1500 and IC1501.
8	MA7	IC1500/1501 30pin	IC1502 207pin	56Ω ± 5%	Same for both IC1500 and IC1501.
9	MA8	IC1500/1501 31pin	IC1502 204pin	56Ω ± 5%	Same for both IC1500 and IC1501.
10	MA9	IC1500/1501 32pin	IC1502 201pin	56Ω ± 5%	Same for both IC1500 and IC1501.
11	MA10	IC1500/1501 20pin	IC1502 206pin	56Ω ± 5%	Same for both IC1500 and IC1501.
12	MA11	IC1500/1501 19pin	IC1502 203pin	56Ω ± 5%	Same for both IC1500 and IC1501.
13	MDQ0	IC1500/1501 2pin	IC1502 159pin	56Ω ± 5%	Same for both IC1500 and IC1501.
14	MDQ1	IC1500/1501 3pin	IC1502 162pin	56Ω ± 5%	Same for both IC1500 and IC1501.
15	MDQ2	IC1500/1501 5pin	IC1502 165pin	56Ω ± 5%	Same for both IC1500 and IC1501.
16	MDQ3	IC1500/1501 6pin	IC1502 168pin	56Ω ± 5%	Same for both IC1500 and IC1501.
17	MDQ4	IC1500/1501 8pin	IC1502 171pin	56Ω ± 5%	Same for both IC1500 and IC1501.
18	MDQ5	IC1500/1501 9pin	IC1502 175pin	56Ω ± 5%	Same for both IC1500 and IC1501.
19	MDQ6	IC1500/1501 11pin	IC1502 178pin	56Ω ± 5%	Same for both IC1500 and IC1501.
20	MDQ7	IC1500/1501 12pin	IC1502 181pin	56Ω ± 5%	Same for both IC1500 and IC1501.
21	MDQ8	IC1500/1501 39pin	IC1502 180pin	56Ω ± 5%	Same for both IC1500 and IC1501.
22	MDQ9	IC1500/1501 40pin	IC1502 177pin	56Ω ± 5%	Same for both IC1500 and IC1501.
23	MDQ10	IC1500/1501 42pin	IC1502 173pin	56Ω ± 5%	Same for both IC1500 and IC1501.
24	MDQ11	IC1500/1501 43pin	IC1502 170pin	56Ω ± 5%	Same for both IC1500 and IC1501.
25	MDQ12	IC1500/1501 45pin	IC1502 167pin	56Ω ± 5%	Same for both IC1500 and IC1501.
26	MDQ13	IC1500/1501 46pin	IC1502 164pin	56Ω ± 5%	Same for both IC1500 and IC1501.
27	MDQ14	IC1500/1501 48pin	IC1502 161pin	56Ω ± 5%	Same for both IC1500 and IC1501.
28	MDQ15	IC1500/1501 49pin	IC1502 158pin	56Ω ± 5%	Same for both IC1500 and IC1501.
29	MCK	IC1500/1501 35pin	IC1502 185pin	56Ω ± 5%	Same for both IC1500 and IC1501.
30	XWE	IC1500/1501 15pin	IC1502 193pin	56Ω ± 5%	Same for both IC1500 and IC1501.
31	XCAS	IC1500/1501 16pin	IC1502 195pin	56Ω ± 5%	Same for both IC1500 and IC1501.
32	XRAS	IC1500/1501 17pin	IC1502 196pin	56Ω ± 5%	Same for both IC1500 and IC1501.
33	XCSM	IC1500 18pin	IC1502 199pin	56Ω ± 5%	Same for both IC1500 and IC1501.
34	XCSE	IC1501 18pin	IC1502 198pin	56Ω ± 5%	
35	DQMUM	IC1500 14pin	IC1502 192pin	56Ω ± 5%	
36	DQMLM	IC1500 36pin	IC1502 189pin	56Ω ± 5%	
37	DQMUE	IC1500 14pin	IC1502 190pin	56Ω ± 5%	
38	DQMLE	IC1500 36pin	IC1502 187pin	56Ω ± 5%	



Schematic diagram ⑥

Check 7: Is the microprocessor operating normally?

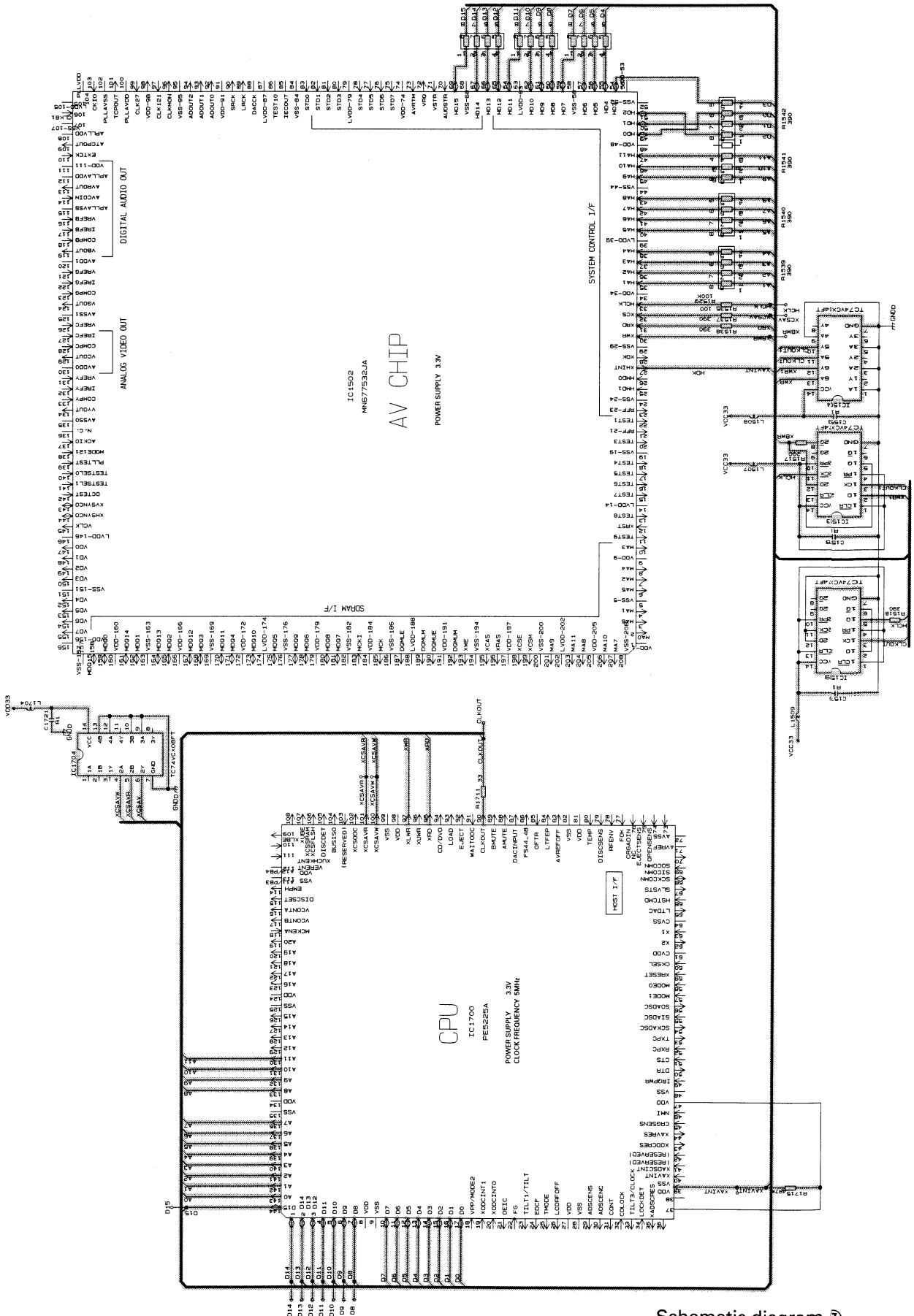
Verify the circuit described in Figure ⑦.

This check is the same for all DVD-V compatible modules.

Check the conductivity of both the "Verification location 1" and the "Verification location2."

If the result is not satisfactory, check to see if there are any problems with the resin flux cored solder, parts and components, in areas where a problem occurs, for the overall sequence of "output – input" of the checked location.

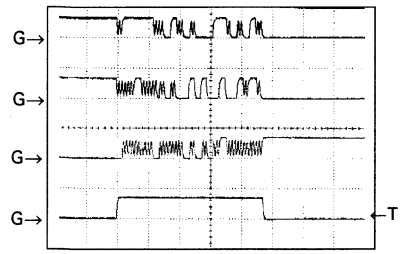
NO.	Signal name	Verification location 1	Verification location 2	Verification Media	Rated value	Others
1	A1	IC1700 142pin	IC1502 35pin	ALL	390Ω ± 5%	
2	A2	IC1700 141pin	IC1502 36pin	ALL	390Ω ± 5%	
3	A3	IC1700 140pin	IC1502 37pin	ALL	390Ω ± 5%	
4	A4	IC1700 139pin	IC1502 38pin	ALL	390Ω ± 5%	
5	A5	IC1700 138pin	IC1502 40pin	ALL	390Ω ± 5%	
6	A6	IC1700 137pin	IC1502 41pin	ALL	390Ω ± 5%	
7	A7	IC1700 136pin	IC1502 42pin	ALL	390Ω ± 5%	
8	A8	IC1700 133pin	IC1502 43pin	ALL	390Ω ± 5%	
9	A9	IC1700 132pin	IC1502 45pin	ALL	390Ω ± 5%	
10	A10	IC1700 131pin	IC1502 46pin	ALL	390Ω ± 5%	
11	A11	IC1700 130pin	IC1502 47pin	ALL	390Ω ± 5%	
12	D0	IC1700 17pin	IC1502 49pin	ALL	390Ω ± 5%	
13	D1	IC1700 16pin	IC1502 50pin	ALL	390Ω ± 5%	
14	D2	IC1700 15pin	IC1502 51pin	ALL	390Ω ± 5%	
15	D3	IC1700 14pin	IC1502 54pin	ALL	390Ω ± 5%	
16	D4	IC1700 13pin	IC1502 55pin	ALL	390Ω ± 5%	
17	D5	IC1700 12pin	IC1502 56pin	ALL	390Ω ± 5%	
18	D6	IC1700 11pin	IC1502 57pin	ALL	390Ω ± 5%	
19	D7	IC1700 10pin	IC1502 59pin	ALL	390Ω ± 5%	
20	D8	IC1700 7pin	IC1502 60pin	ALL	390Ω ± 5%	
21	D9	IC1700 6pin	IC1502 61pin	ALL	390Ω ± 5%	
22	D10	IC1700 5pin	IC1502 62pin	ALL	390Ω ± 5%	
23	D11	IC1700 4pin	IC1502 64pin	ALL	390Ω ± 5%	
24	D12	IC1700 3pin	IC1502 65pin	ALL	390Ω ± 5%	
25	D13	IC1700 2pin	IC1502 66pin	ALL	390Ω ± 5%	
26	D14	IC1700 1pin	IC1502 67pin	ALL	390Ω ± 5%	
27	D15	IC1700 144pin	IC1502 69pin	ALL	390Ω ± 5%	
28	XCSAVR	IC1700 101pin	IC1704 5pin	ALL	0Ω	
29	XCSAVW	IC1700 100pin	IC1704 4pin	ALL	0Ω	
30	XCSAV	IC1704 6pin	IC1502 32pin	ALL	390Ω ± 5%	
31	XAVINT	IC1700 39pin	IC1502 27pin	ALL	0Ω	
32	XRD	IC1700 95pin	IC1502 31pin	ALL	390Ω ± 5%	
33	CLKOUT	IC1700 90pin	IC1509 3pin	ALL	33Ω	Dividing circuit For verification location 1, include also IC1054 pin-11
34	HCLK	IC1509 5pin	IC1502 33pin	ALL	200Ω ± 5%	
35	XWR	IC1700 97pin	IC1504 13pin	ALL	0Ω	
36	XBWR	IC1503 8pin	IC1502 30pin	ALL	200Ω ± 5%	



Schematic diagram ⑦

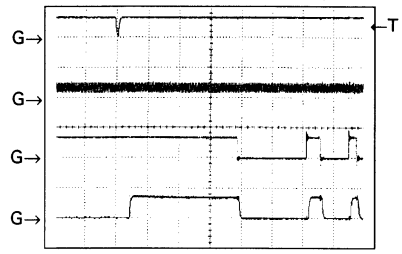
Note:1. The encircled number denote measuring pointes in the circuit diagram.
2. Reference voltage VHALF : 1.65V

⑪ CH1: STD1
⑫ CH2: STD4
⑬ CH3: STD7
⑭ CH4: STENABLE
5V/div. 2μs/div.



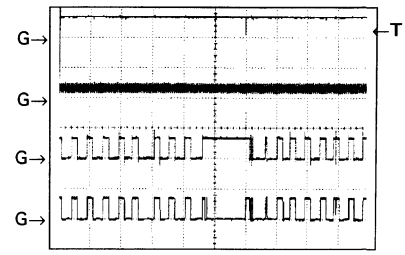
Waveform1

⑮ CH1: AVRTM
⑯ CH2: STCLK
⑰ CH3: STVALID
⑭ CH4: STENABLE
5V/div. 2μs/div.



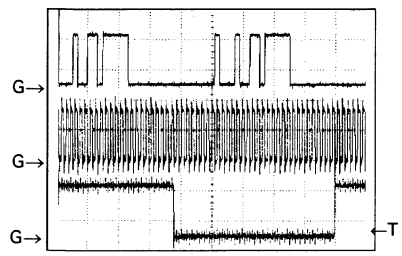
Waveform2(1)

⑮ CH1: AVRTM
⑯ CH2: STCLK
⑰ CH3: STVALID
⑭ CH4: STENABLE
5V/div. 50μs/div.



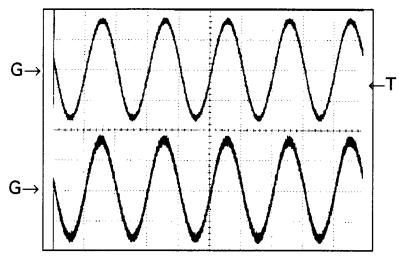
Waveform2(2)

⑱ CH1: AOUT0
⑲ CH2: SRCKAV
⑳ CH3: LRCKAV
2V/div. 2μs/div.



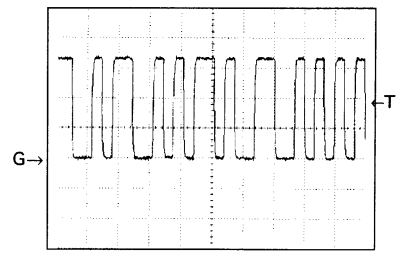
Waveform3

㉒ CH1: LO
㉓ CH2: RO
1V/div. 500μs/div.



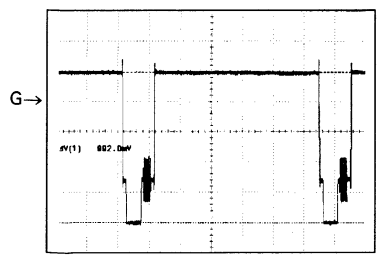
Waveform4

㉑ CH1: IEC958 1V/div. 500ns/div.



Waveform5

㉔ CH1: COMPO 200mV/div. 10μs/div.
[White 100% output]



Waveform6

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

● **Removing the Case (not shown)**

1. Remove the Case.

● **Removing the DVD Mechanism Module (Fig.1)**

1 Remove the four screws.

Disconnect the connector and then remove the DVD Mechanism Module.

● **Removing the Panel Assy (Fig.1)**

2 Remove the two screws and then remove the Panel Assy.

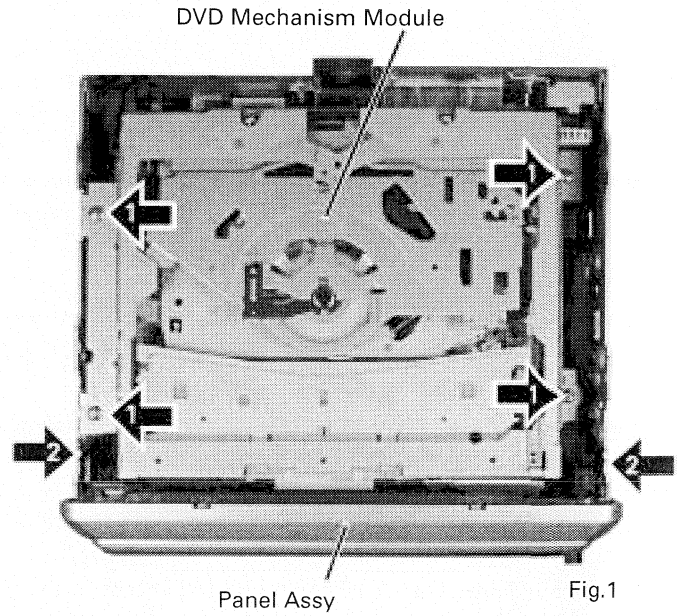


Fig.1

● **Removing the Audio Control PCB (Fig.2)**

1 Straight the tabs at five locations indicated.

2 Remove the two screws and then remove the Audio Control PCB.

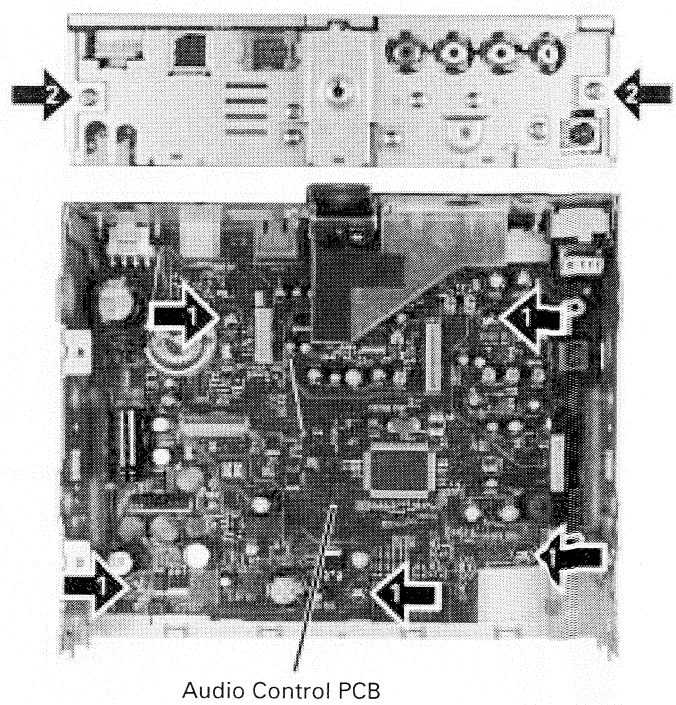


Fig.2

● Handling the mechanical module

1. The mechanical module should be handled by holding the upper frame and main frame of the mechanical module.
2. The front section of the upper frame is not very sturdy, so this section should not be held too firmly (see fig. 3).

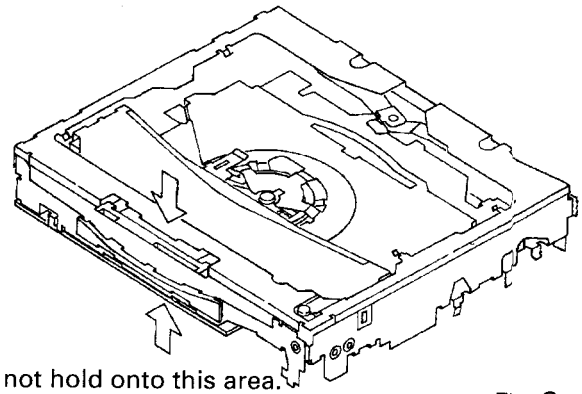


Fig. 3

● Removing the DVD Core Unit V

1. Bring the mechanism to a locked position (disk load standby position).
2. Turn the mechanical module upside down.
3. Set the pick-up flexible cable to a shorted position on the land end (the other is auxiliary), and turn the SW knob in the direction opposite to OP (see fig. 4).
4. Remove the pick-up flexible cable and the CRG flexible cable from the connector. Remove the solder on the lead wires of the load motor.
5. Remove a screw and two solders then remove the holder.
6. Remove screws at three locations, and remove the DVD Core Unit V (lift the board in the direction of the white arrow shown in fig. 5, and remove it out diagonally).

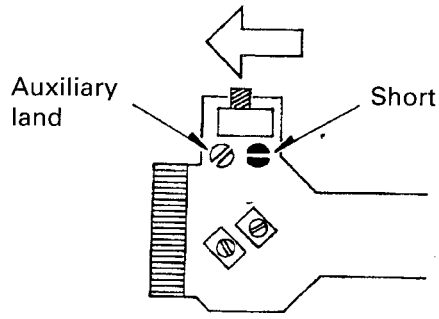


Fig. 4

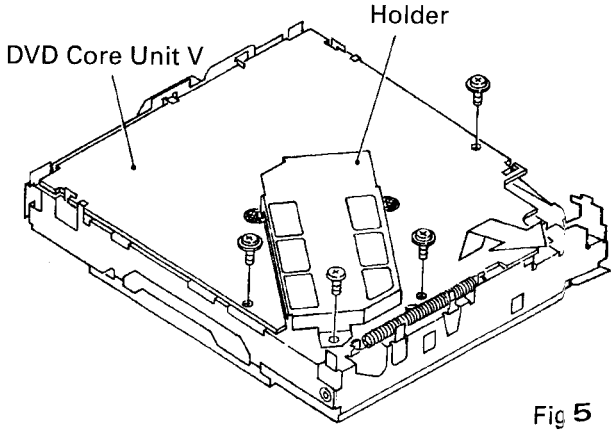


Fig. 5

● Removing the PU unit (see fig. 6)

1. Lift the pick-up rack to the center of the axis of the rack, turn it 90 degrees first, then press on it lightly, and fix it in place temporarily.
2. Remove the screw that keeps the main shaft clamp spring in place, and remove the main shaft clamp spring.
3. Remove the PU unit with the main shaft attached.

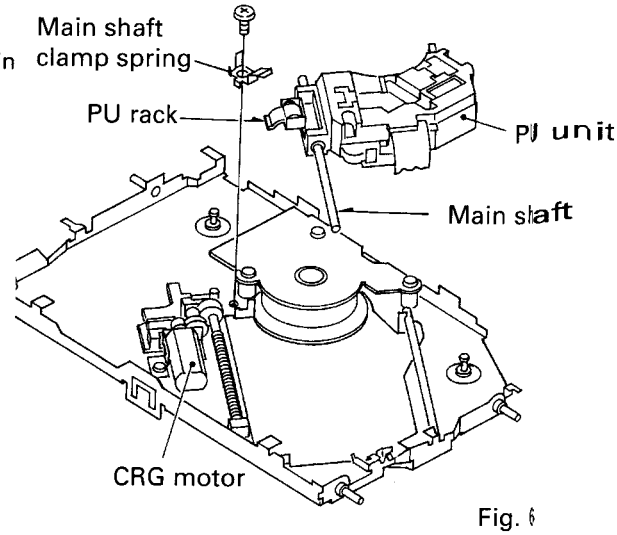
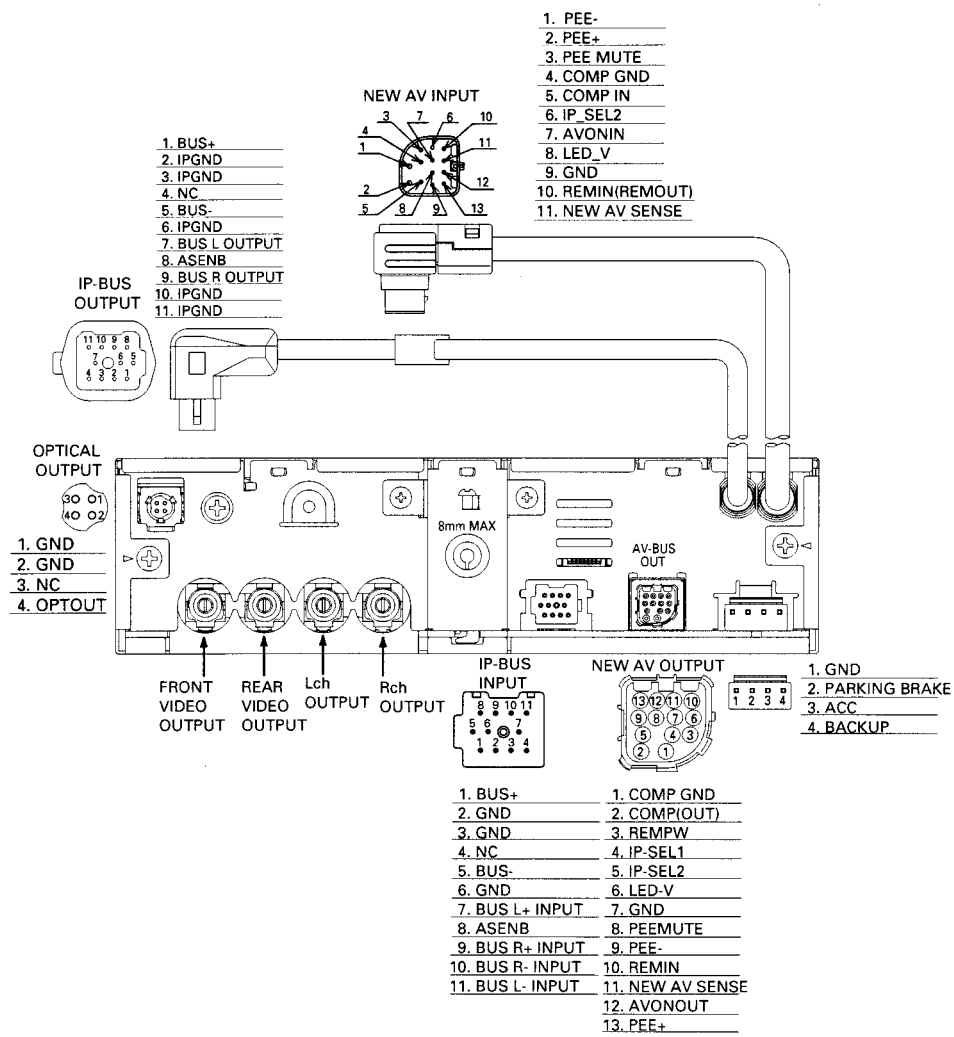


Fig. 6

7.1.2 CONNECTOR FUNCTION DESCRIPTION



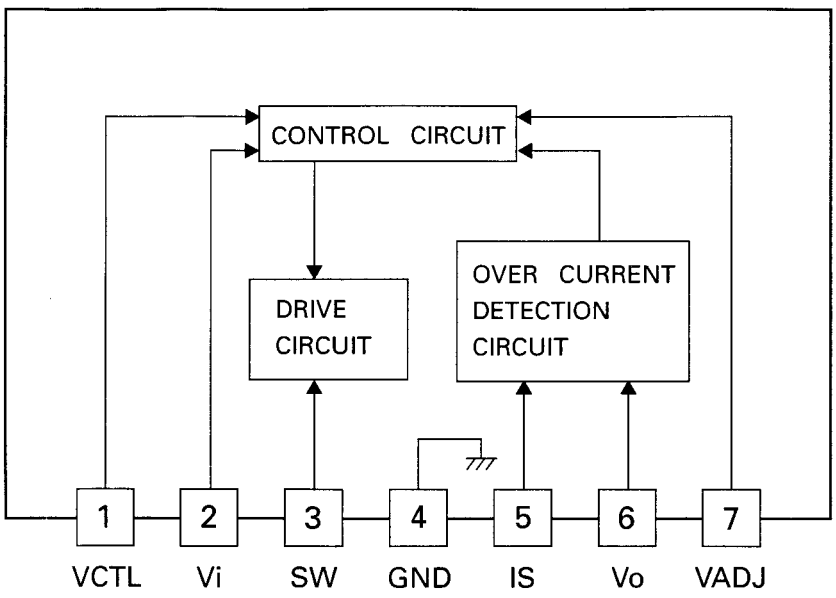
7.2 PARTS

7.2.1 IC

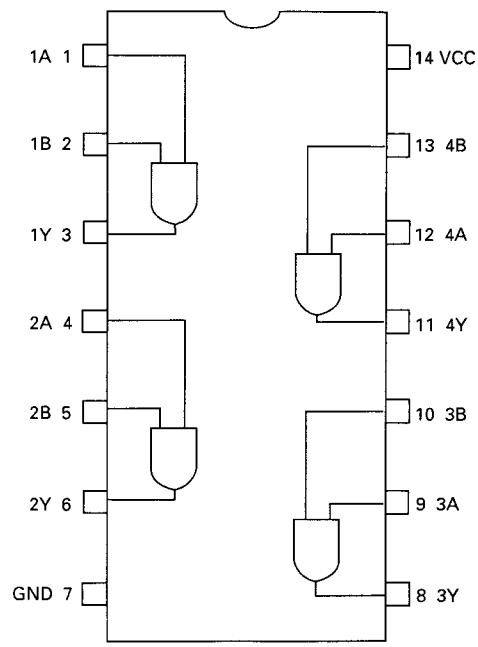
BP5250	AN8702FH	MN677532JAUB	PE5277A
TC74VHCT08AFT	MN677061ZYUB	TC74VCX04FT	BA033SFP
BA08SFP	MNZS25BDAUB	SM8703AV	BA18BC0WFP
BA00ASFP	TC74LCX244FT	PD6354B	BA00BC0WFP
PE5229A	MSM56V16160F8TKFM	AK4380VT	
LC75822W	TC74VCX74FT	TC74VCX08FT	

IC's marked by * are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

BP5250



* TC74VHCT08AFT



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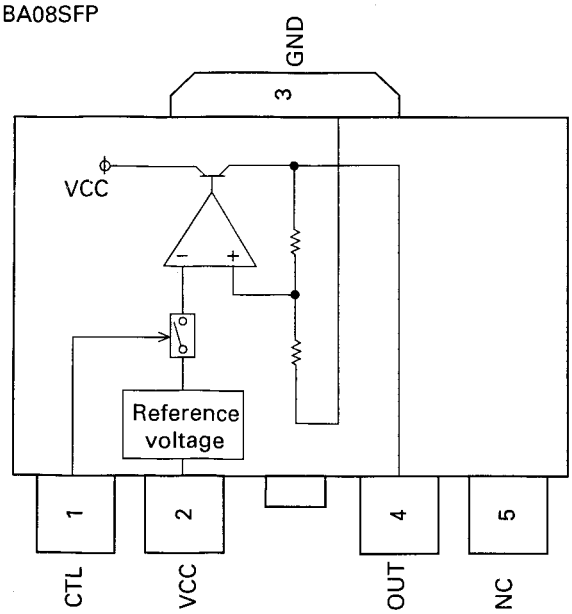

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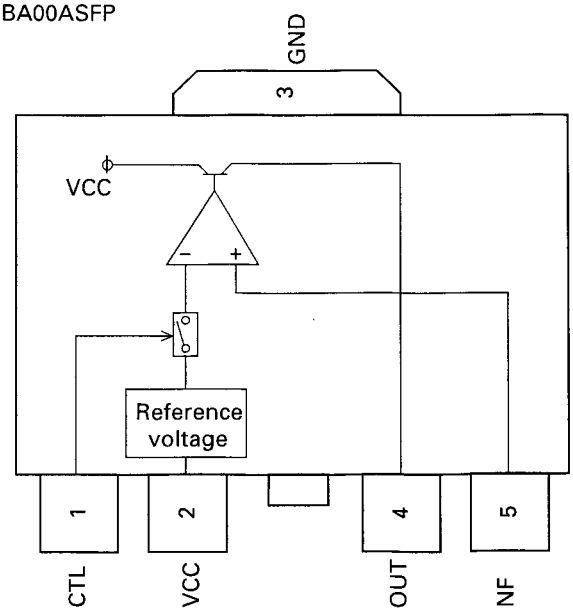


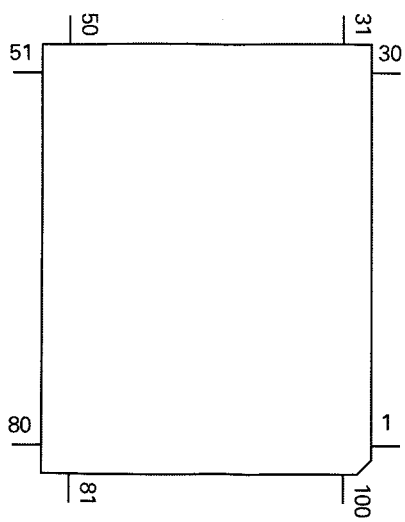
● **Pin Functions(PE5229A)**

Pin No.	Pin Name	I/O	Format	Function and Operation
1	LCDPOW	O	C	LCD power output
2	NC			Not used
3	ROMDATA	O	C	(ROM correction)data output
4	ROMCLK	O	C	(ROM correction)clock output
5	ROMCS	O	C	(ROM correction)chip select output
6-10	NC			Not used
11	$\overline{\text{RESET}}$			(FLASH use)Reset
12, 13	XT2, 1			Clock input(Not used)
14	VSS			GND
15, 16	X2, 1			System clock input
17	REGOFF			Regulator operation specification signal
18	REGC			Memory connection for the regulator output stabilization
19	VDD			Power supply
20	NC			Not used
21	SYSPW	O	C	System power output
22	IPAUTO	O	C	IP auto ON setting state output(H:auto ON)
23	NC			Not used
24	IPPW	O	C	(IPBUS)Driver power supply output
25	DVSVSEL	O	C	IP-BUS line select(H:DVDS/L:NewAV-IN)
26	DVSSEL	O	C	IP-BUS line select(H:DVDS/L:IP-IN)
27	RMUTE	O	C	Rear mute output
28	MUTE	O	C	System mute output(for IP-BUS)
29	NC			Not used
30	PBSENS	I		Parking sense input
31	MSSRVD	O	C	(MS2)SRVDD power output(3.3v)
32	MSVD	O	C	(MS2)VD power output(8.0v)
33	MSMVD	O	C	(MS2)Main power supply power output(5v)
34	MSMCVD	O	C	(MS2)Microcomputer power output(3.3v)
35	IRQPWR	O	C	(MS2)IRQPWR output
36	XRRESET	O	C	(MS2)Reset output
37	TMODE	O	C	(MS2)TEST mode output
38	NC			Not used
39	TESTIN	I		Chip test program input
40	VSS			GND
41	VDD			Power supply
42	MSAMUTE	I		MS mute request
43	PILMPOW	O	C	Loading slot illumination power output
44	NC			Not used
45	SWVDD	O	C	LED power supply output
46	NC			Not used
47	LCDDATA	O	C	(LED driver)Data output
48	LCDCLK	O	C	(LED driver)Clock output
49	LCDCE	O	C	(LED driver)enable output
50	LCDINH	O	C	(LED driver)inhibit output
51	CODEIN	I		Model discrimination
52-60	NC			Not used
61	RMMUTE	O	C	Rear monitor mute output
62	NC			Not used
63	FMMUTE	O	C	Front monitor mute output
64	NC			Not used
65	TSK	O	C	Chip test(clock)
66	TSI	I		Chip test(data input)
67	TSO	O	C	Chip test(Data output)
68	SEIHIN	I		Model discrimination input
69	MSIN	I		Master(H)/slave(L)select input
70	ISENS	I		Illumination sense input
71, 72	NC			Not used

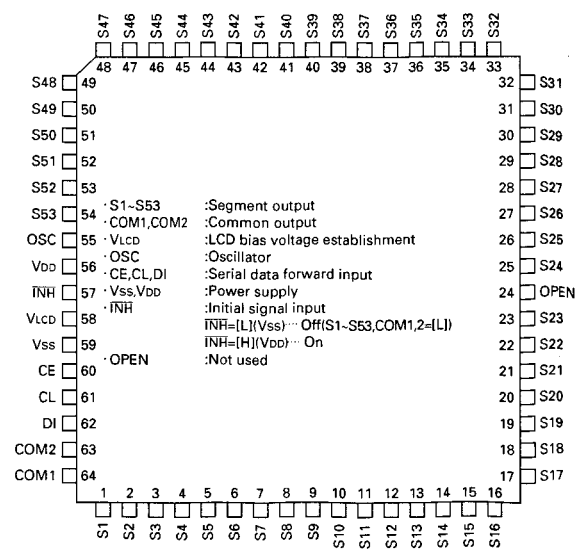
Pin No.	Pin Name	I/O	Format	Function and Operation
73	TEST			IC test pin(FLASH use)
74	MODELIN	I		Model select input
75, 76	KEYDT0, 1	I		Key input 0, 1
77	VDSENS	I		MS2VD sense
78	DISCSET	I		(MS2)DISC sense input
79	NC			Not used
80	MEMHLD	O	C	Memory hold output(standby=L,active=H)
81	$\overline{\text{ADPW}}$	O	C	A/D converter power supply output
82	(VDD)			A/D power supply
83	(VDD)			A/D reference voltage
84	(GND)			A/D GND
85	RX	I		(IP-BUS)data input
86	TX	O	C	(IP-BUS)data output
87	NC			Not used
88, 89	NC			Not used
90	$\overline{\text{DSENS}}$	I		Detach sense
91	$\overline{\text{REMIN}}$	I		Remote control input
92	$\overline{\text{ASENS}}$	I		Acc sense input
93	$\overline{\text{BSENS}}$	I		Bup sense input
94	NC			Not used
95	MSTOSYS	I		MS2 control (Rx)
96	SYSTOMS	O	C	MS2 control (Tx)
97	NC			Not used
98	$\overline{\text{CSENS}}$	I		CLOSE sense
99	NC			Not used
100	PEE	O	C	Beep tone output

Format	Meaning
C	C MOS

*PE5229A



* LC75822W



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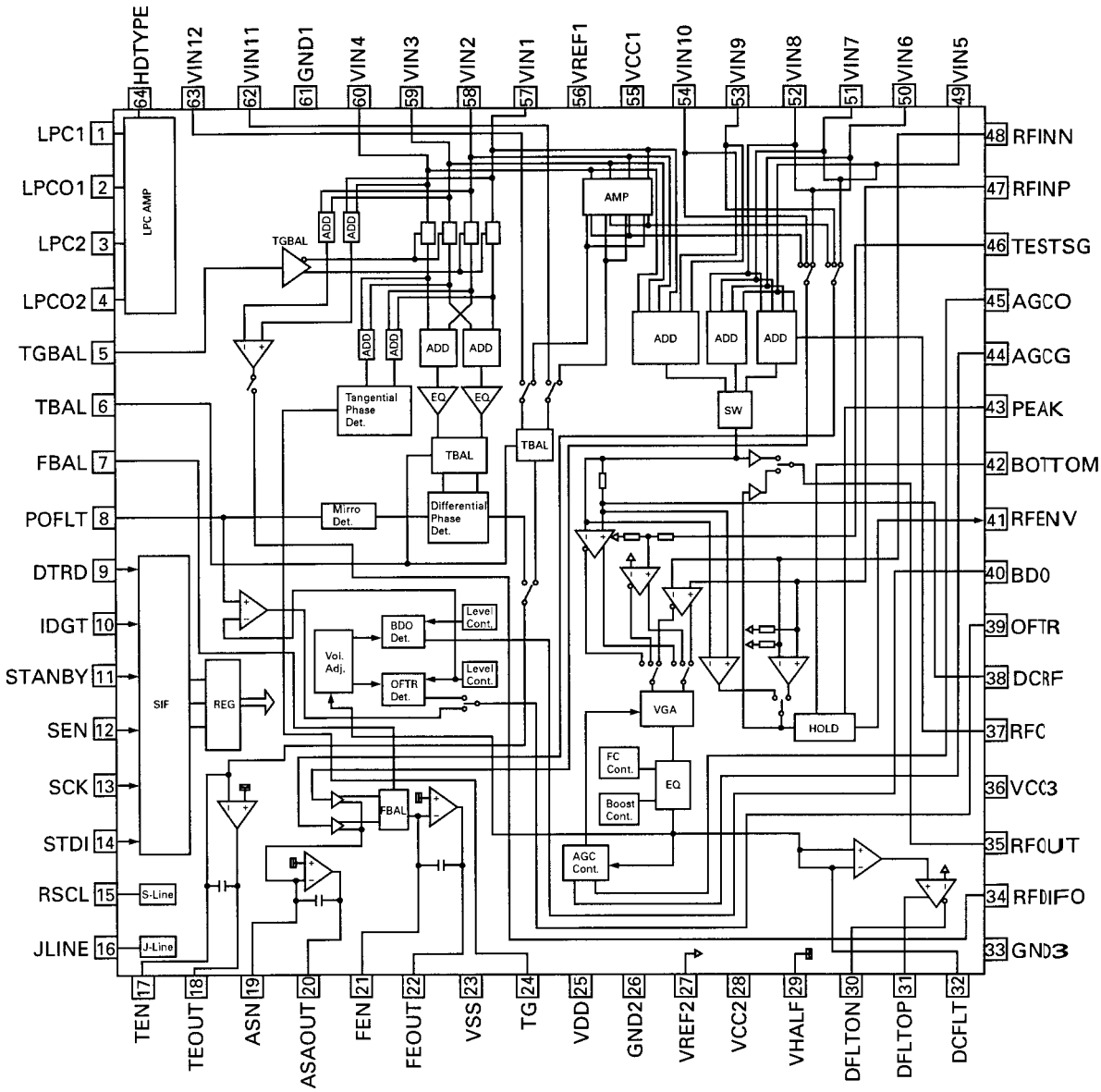
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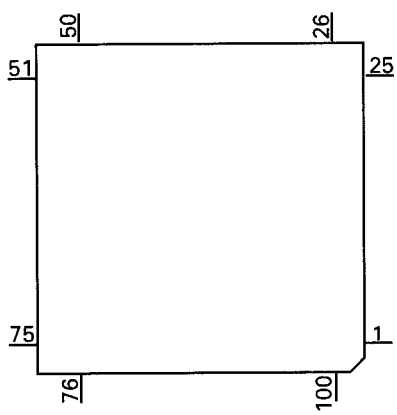
VIN12 63
VIN11 62
GND1 61
VIN4 60
VIN3 59
VIN2 58
VIN1 57
VREF1 56
VCC1 55
VIN10 54
VIN9 53
VIN8 52
VIN7 51
VIN6 50
VIN5 49
LPC1 1
LPCO1 2
LPC2 3
LPCO2 4
TGBAL 5
TBAL 6
FBAL 7
POFLT 8
DTRD 9
IDGT 10
STANBY 11
SEN 12
SCK 13
STDI 14
RSCL 15
JLINE 16
RFINN 48
RFINP 47
TESTSG 46
AGCO 45
AGCG 44
PEAK 43
BOTTOM 42
RFENV 41
BD0 40
OFTR 39
DCRF 38
RFC 37
VCC3 36
RFOUT 35
RFDIFO 34
GND3 33
DCFLT 32
DFLTOP 31
DFLTON 30
VHALF 29
VCC2 28
VREF2 27
GND2 26
VDD 25
TG 24
VSS 23
FEOUT 22
FEN 21
ASAOUT 20
ASN 19
TEOUT 18
TEN 17
LPC AMP
TGBAL
ADD
Tangential Phase Det.
EQ
TBAL
Mirro Det.
Differential Phase Det.
AMP
SW
Vol. Adj.
BDO Det.
OFTR Det.
Level Cont.
SIF
REG
S-Line
J-Line
FBAL
VGA
HOLD
FC Cont.
Boost Cont.
AGC Cont.

● **Pin Functions(MN677061ZYUB)**

Pin No.	Pin Name	I/O	Function and Operation
1	AS	I	Full adder signal input
2	TE	I	Phase-contrast/Three beam tracking error input
3	FE	I	Focus error input
4	AVDD		Analog power supply (3.3V)
5	FODRV	O	Focus driver output
6	TRDRV	O	Tracking driver output
7	AVSS1		Analog GND
8	ARF	I	Equivalent RF+ input
9	$\overline{\text{ARF}}$	I	Equivalent RF- input
10,11	IREF1,2	I	DBAL reference current input 1,2
12,13	DSLF1,2	I/O	DSL capacitor input/output 1,2
14	AVDD2		Analog power supply (3.3V)
15	VHALF		Reference voltage (1.65±0.1V)
16,17	NC		Not used
18	VREFH		Reference voltage (2.2±0.1V)
19	RVI	I/O	VERFH reference current resistor input/output
20	AVSS2		Analog GND
21,22	PLFLT1,2	O	PLL capacitor output 1,2
23	JITOUT	I/O	Jitter signal monitor input/output
24	N.C.1	I	Open
25	N.C.2	I/O	Pull up
26	NC		Not used
27	AVDD3		Analog power supply (3.3V)
28	N.C.3	I	Pull up
29	N.C.4		Not used
30	AVSS3		Analog GND
31	N.C.5		Pull up
32	N.C.6		Not used
33	N.C.7		Open
34	TRCRS	I	Track cross production signal input
35	VCOF	I/O	JFVCO control voltage input/output
36	DBALO	O	DSL balance adjustment output
37	JLIN	O	J-line set output
38	AVDD4		Analog power supply (3.3V)
39	LOUT	O	Analog audio left output
40	ROUT	O	Analog audio right output
41	AVSS4	I	Analog GND
42	GBAL	O	Tangential balance adjustment output
43	TBAL	O	Tracking balance adjustment output
44	FBAL	O	Focus balance adjustment output
45	VSS331		I/O GND
46	VDD331		I/O power supply (3.3V)
47	OFTR	I	Off track signal input
48	SYSCLK	I	System clock input
49	BDO	I	RF dropout signal input
50	TSTSG	O	Calibration signal output
51	TRSDRV	O	Traverse driver output
52	SPDRV	O	Spindle driver output
53	FG	I	FG signal input
54	N.C.8		Not used
55	CRGDRV	O	Carriage driver output
56	N.C.10		Not used
57	VSS251		GND
58	VDD251		Power supply
59	DTRD	I	Data read control signal output
60	LDGT	I	GND
61	LRCK	O	LR channel data strobe output
62	SBBCLK	O	CD sub code synchronism signal output

Pin No.	Pin Name	I/O	Function and Operation
63	PLLOK	I	PLL drag OK signal input
64	IDHOLD		GND
65	DACLRCK	I	1bit DAC - LR channel data strobe input
66	DACDATA	I	CD 1bit DAC channel data input
67	$\overline{\text{TRON}}$	O	Tracking ON output
68	DACCLK	O	1bit DAC channel data shift clock input
69	IPFLG	O	CIRG error flag output
70	SUBC	O	CD sub code output
71	$\overline{\text{CLDCK}}$	O	CD sub code data frame clock output
72	MINTEST	I	GND
73	TEST	I	GND
74	VSS332		I/O GND
75	VDD332		I/O power supply (3.3V)
76	CHCK40	O	SRDATA clock output
77–80	DAT3–0	O	SRDATA output 3–0
81	VSS333		I/O GND
82	VDD333		I/O power supply (3.3V)
83	TX	O	Digital audio interface data output
84	XRESET	I	Reset input
85	ENS	I	Servo DSC serial I/F chip select input
86	ENC	I	CIRC serial I/F chip select input
87	CPUIRQ	O	Interrupt request output to system computer
88	CPUCLK	I	System computer serial I/F clock input
89	CPUDTIN	I	System computer serial I/F data input
90	CPUDTOUT	O	System computer serial I/F data output
91,92	MONA,B	O	Monitor terminal output A,B
93	CDPLLOK	O	CD PLL drag OK signal output
94	N.C.12		Not used
95	VSS252		GND
96	VDD252		Power supply
97,98	N.C.		Pull up
99	TG	I	Tangential phase-contrast input
100	REFNV	I	RF envelop input

*MN677061ZYUB



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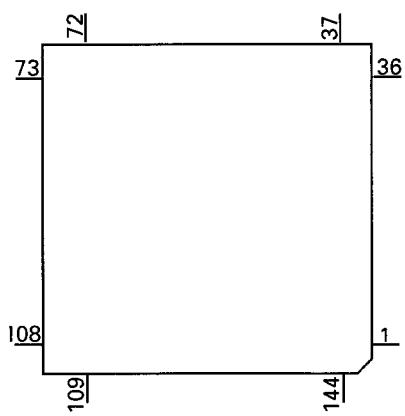

● **Pin Functions(MNZS25BDAUB)**

Pin No.	Pin Name	I/O	Function and Operation
1	HDD15	I/O	ATAPI HOST data input/output 15
2	HDD0	I/O	ATAPI HOST data input/output 0
3	HDD14	I/O	ATAPI HOST data input/output 14
4	VDD31		I/O power supply (3.3V)
5	HDD1	I/O	ATAPI HOST data input/output 1
6	HDD13	I/O	ATAPI HOST data input/output 13
7	HDD2	I/O	ATAPI HOST data input/output 2
8	VSS1		GND
9	HDD12	I/O	ATAPI HOST data input/output 12
10	VDD21		Digital power supply (2.7V)
11	HDD3	I/O	ATAPI HOST data input/output 3
12	HDD11	I/O	ATAPI HOST data input/output 11
13	HDD4	I/O	ATAPI HOST data input/output 4
14	HDD10	I/O	ATAPI HOST data input/output 10
15	VDD32		I/O power supply (3.3V)
16	HDD5	I/O	ATAPI HOST data input/output 5
17	HDD9	I/O	ATAPI HOST data input/output 9
18	VSS2		GND
19	HDD6	I/O	ATAPI HOST data input/output 6
20	HDD8	I/O	ATAPI HOST data input/output 8
21	HDD7	I/O	ATAPI HOST data input/output 7
22	VDDH		ATAPI reference power supply (5.0V)
23	$\overline{\text{RESET}}$		Reset input
24	MASTER	I/O	ATAPI master/slave select input/output
25	$\overline{\text{INT0}}$	O	System computer interrupt output 0
26	$\overline{\text{INT1}}$	O	System computer interrupt output 1
27	WAITODC	O	System computer bus wait control output
28	$\overline{\text{MRST}}$	O	System computer reset output
29	DASPST	I	DASP initialize value input
30	VDD33		I/O power supply (3.3V)
31	NC		Not used
32	P2	O	PORT output
33	UATASEL	I	Internal clock select input
34	VSS3		GND
35	PVSSDRAM1		GND
36	PVDDDRAM1		Digital power supply (2.7V)
37,38	CPUADR17,16	I	System computer address input 17,16
39	PVSSDRAM2		GND
40–43	CPUADR15-12	I	System computer address input 15-12
44	PVDDDRAM2		Digital power supply (2.7V)
45–55	CPUADR11-1	I	System computer address input11-1
56	VSS4		GND
57	CPUADR0	I	System computer address input 0
58	$\overline{\text{CS}}$	I	System computer chip select input
59	$\overline{\text{WR}}$	I	System computer write signal input
60	$\overline{\text{RD}}$	I	System computer read signal input
61	VDD34		I/O power supply (3.3V)
62,63	CPUDT7,6	I/O	System computer data input/output 7,6
64,65	PTESTDRAM0,1		GND
66	VDD22		Digital power supply (2.7V)
67	VSS5		GND
68–70	CPUDT5-3	I/O	System computer data input/output 5-3
71	VSS6		GND
72–74	CPUDT2-0	I/O	System computer data input/output 2-0
75	CLKOUT1	O	System computer clock output 1
76	VDD35		I/O power supply (3.3V)
77	NC		Not used
78	DTRD	O	CAPA read gate output
79	NC		Not used

Pin No.	Pin Name	I/O	Function and Operation
80	BDO	I	RF dropout signal input
81	LRCK	I	LR identifier signal input
82	SBBCLK	I	CD sub code block clock input
83	VSS7		GND
84	MMOD		GND
85	$\overline{RST}$	I	System reset input
86	VDD23		Digital power supply (2.7V)
87	CLKOUT2	O	System computer clock output 2
88	PLLOK	O	Frame mark detect signal output
89	NC		Not used
90	DACLRCK	O	LR identifier signal output
91	DACDATA	O	Serial output
92	$\overline{TRON}$	I	Tracking ON input
93,94	NC		Not used
95	DACCLK	I	1bit DAC Serial output clock input
96	IPFLG	I	Interpolation flag input
97	TX	I	TX input
98	LRCK	I	VSS
99	VSS8		GND
100	OSCI1	I	Oscillator pin input
101	OSCO1	O	Oscillator pin output
102	VDD36		I/O power supply (3.3V)
103	PVSS		GND
104	PVDD		I/O power supply (3.3V)
105	P1		VDD3
106	P0		VDD3
107	VSS9		GND
108	NC		Not used
109	SUBC	I	Sub code serial input
110	XCLDCK	I	Sub code Frame clock input
111	CHCK4	I	Read clock input to DAT3-0
112–115	DAT3-0	I	Read data input from DISC 3-0
116	VDD37		I/O power supply (3.3V)
117	SCLOCK	I/O	Pull up
118	SDATA	I/O	Pull up
119–122	MONI3-0	O	Internal signal monitor output 3-0
123	VSS10		GND
124	$\overline{EJECT}$	I	Eject detect input
125	VDD24		Digital power supply (2.7V)
126	$\overline{TRYCL}$	I	Tray close detect input
127	$\overline{DASP}$	I/O	ATAPI drive active/slave connect input/output
128	$\overline{CS3FX}$	I	ATAPI HOST chip select input
129	$\overline{CS1FX}$	I	ATAPI HOST chip select input
130	VDD38		I/O power supply (3.3V)
131	DA2	I/O	ATAPI HOST address input/output 2
132	DA0	I/O	ATAPI HOST address input/output 0
133	$\overline{PDIAG}$	I/O	ATAPI slave/master diagnosis input/output
134	VSS11		GND
135	DA1	I/O	ATAPI HOST address input/output 1
136	$\overline{IOCS16}$	O	ATAPI HOST data bus width select output
137	INTRQ	O	ATAPI HOST interrupt request output
138	VDD39		I/O power supply (3.3V)
139	$\overline{DMACK}$	I	ATAPI HOST DMA response input
140	IORDY	O	ATAPI HOST ready output
141	$\overline{IORD}$	I/O	ATAPI HOST data read input/output
142	VSS12		GND
143	$\overline{IOWR}$	I/O	ATAPI HOST data write input/output
144	DMARQ	O	ATAPI HOST DMA request output

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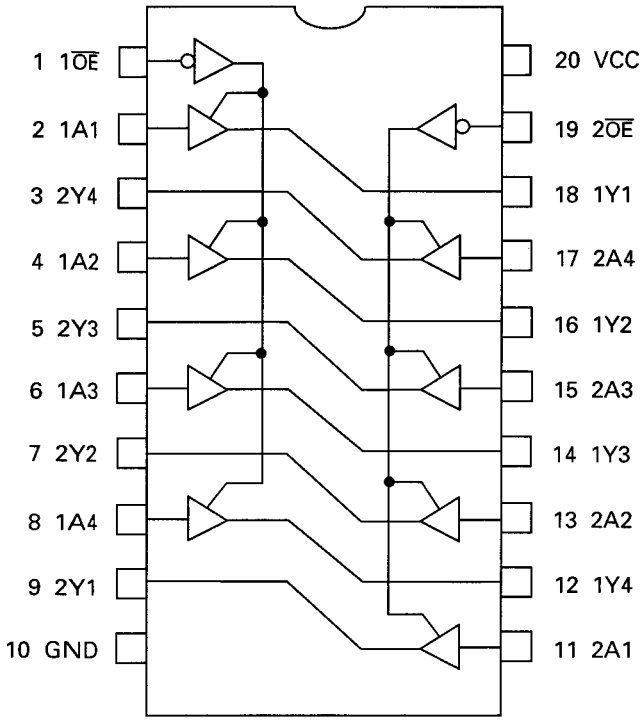

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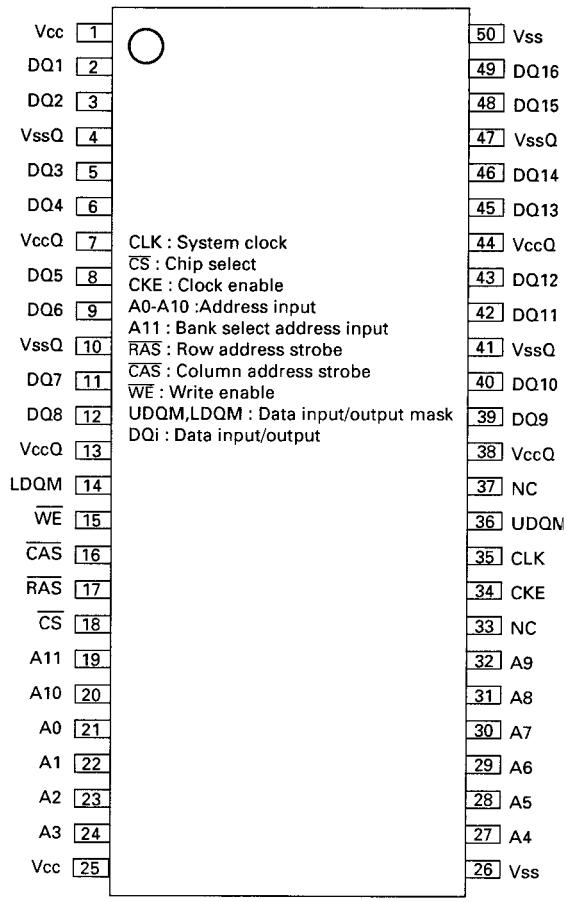

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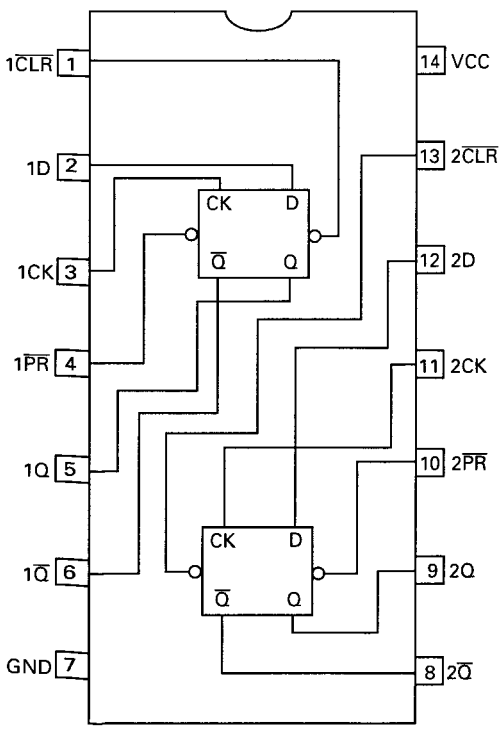


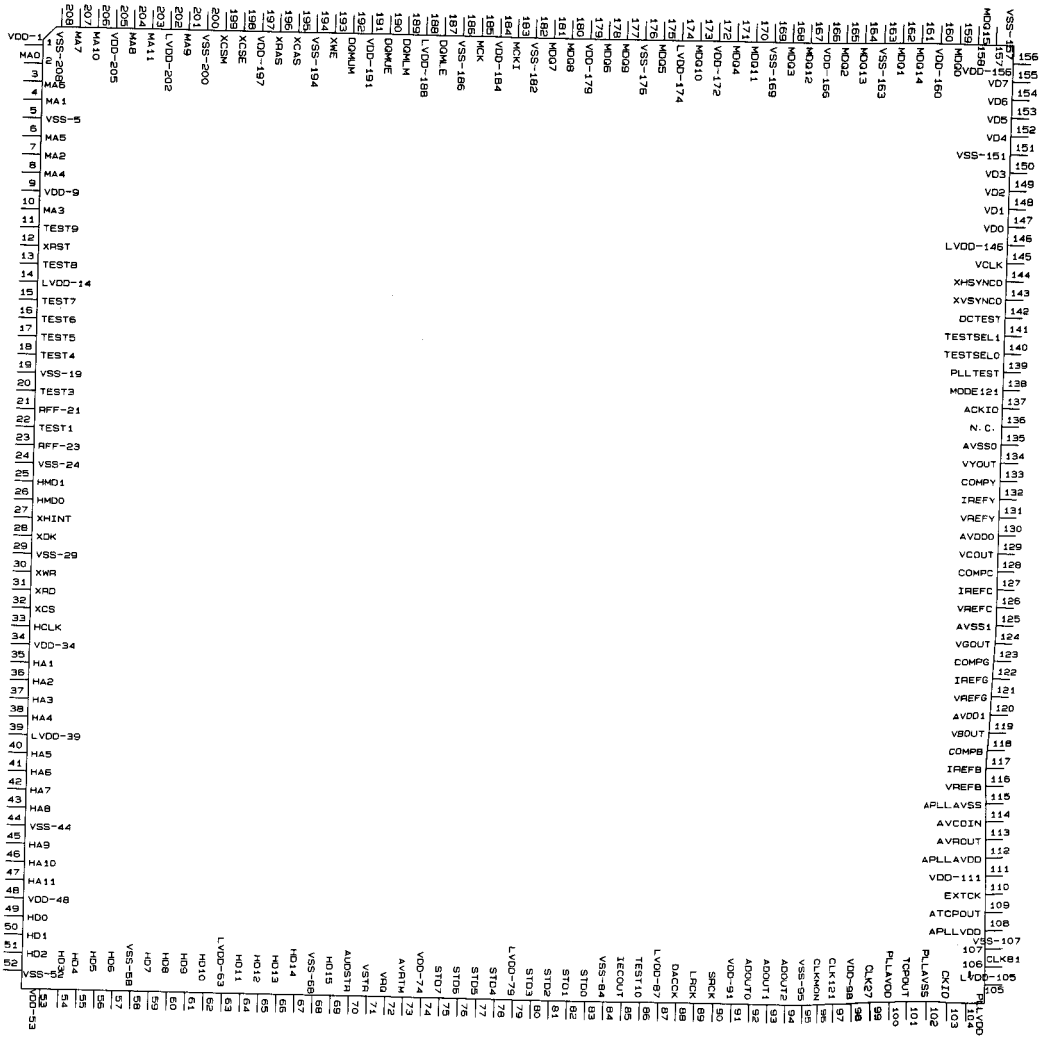
● **Pin Functions(MN677532JAUB)**

Pin No.	Pin Name	I/O	Function and Operation
1	VDD-1		Power supply
2	MA0	O	Bank sell and address
3	MA6	O	Bank sell and address
4	MA1	O	Bank sell and address
5	VSS-5		GND
6	MA5	O	Bank sell and address
7	MA2	O	Bank sell and address
8	MA4	O	Bank sell and address
9	VDD-9		Power supply
10	MA3	O	Bank sell and address
11	TEST9	O	Test signal
12	XRST	I	System reset
13	TEST8	O	Test signal
14	LVDD-14	O	Lch Power supply
15-18	TEST7-4	O	Test signal
19	VSS-19		GND
20	TEST3	O	Test signal
21	RFF-21	O	Repeat first field flag output
22	TEST1	O	Test signal
23	RFF-23	O	Repeat first field flag output
24	VSS-24	O	GND
25,26	HMD1,0	I	Host CPU select
27	XHINT	O	Interrupt strobe
28	XDK	O	Data acknowledge
29	VSS-29		GND
30	XWR	I	Write enable
31	XRD	I	Read enable
32	XCS	I	Chip select
33	HCLK	I	Host CPU clock
34	VDD-34		Power supply
35-38	HA1-4	I	Address bus
39	LVDD-39		Lch Power supply
40-43	HA5-8	I	Address bus
44	VSS-44		GND
45-47	HA9-11	I	Address bus
48	VDD-48	I	Power supply
49-51	HD0-2	I/O	Data bus
52	VSS-52		GND
53	VDD-53	I	Power supply
54-57	HD3-6	I/O	Data bus
58	VSS-58		GND
59-62	HD7-10	I/O	Data bus
63	LVDD-63		Lch Power supply
64-67	HD11-14	I/O	Data bus
68	VSS-68		GND
69	HD15	I/O	Data bus
70	AUDSTR	I	Data strobe
71	VSTR	I	Data strobe
72	VRQ	O	DMA request
73	AVRTM	I	Select separation signal
74	VDD-74		Power supply
75-78	STD7-4	I	Stream data/CD-Audio bypass port
79	LVDD-79		Lch Power supply
80-83	STD3-0	I	Stream data/CD-Audio bypass port
84	VSS-84		GND
85	IECOUT	O	IEC958 data output
86	TEST10	O	Test signal
87	LVDD-87		Lch Power supply

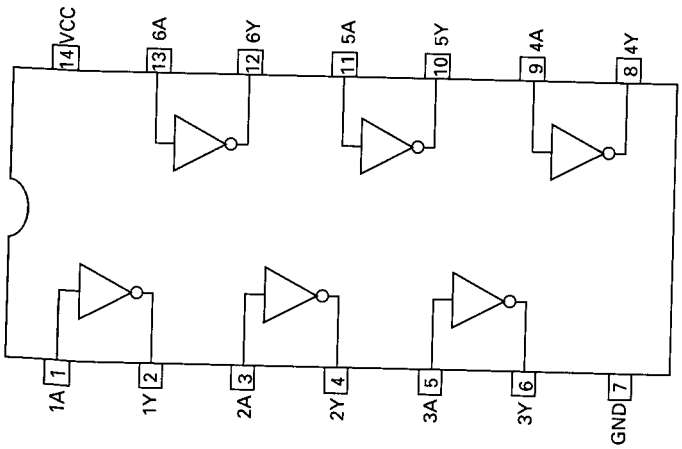
Pin No.	Pin Name	I/O	Function and Operation
88	DACCK	O	DAC clock output
89	LRCK	O	LR clock output
90	SRCK	O	Bit clock output
91	VDD-91		Power supply
92-94	ADOUT0-2	O	Audio data output
95	VSS-95		GND
96	CLKMON	O	Clock monitor
97	CLK121	I	121.5MHz clock input
98	VDD-98	O	Power supply
99	CLK27	I	27MHz clock input
100	PLLAVDD		PLL analog power supply
101	TCPOUT	O	OPEN
102	PLLAVSS	O	OPEN
103	CKIO	I	81MHz clock select
104	PLLVDD		PLL
105	LVDD-105		Lch power supply
106	CLK81	I	81MHz clock input
107	VSS-107	I	GND
108	APLLVDD		Analog PLL power supply
109	ATCPOUT	O	OPEN
110	EXTCK	I	Outside clock output
111	VDD-111		Power supply
112	APLLAVDD		Analog PLL audio power supply
113	AVROUT		OPEN
114	AVCOIN		GND
115	APLLAVSS		Analog PLL audio GND
116	VREFB	I	DAC reference input
117	IREFB	I	DAC resistance terminal for bias current setting
118	COMPB	I	DAC capacity connection terminal for stabilization
119	VBOUT	O	C analog output
120	AVDD1		Analog power supply
121	VREFG	I	DAC reference input
122	IREFG	I	DAC resistance terminal for bias current setting
123	COMPG	I	DAC capacity connection terminal for stabilization
124	VGOUT	O	Cb composite analog output
125	AVSS1		Analog GND
126	VREFC	I	DAC reference input
127	IREFC	I	DAC resistance terminal for bias current setting
128	COMPC	I	DAC capacity connection terminal for stabilization
129	VCOUT	O	Cr C analog output
130	AVDD0		Analog power supply
131	VREFY	I	DAC reference input
132	IREFY	I	DAC resistance terminal for bias current setting
133	COMPY	I	DAC capacity connection terminal for stabilization
134	VYOUT	O	Y analog output
135	AVSS0		Analog GND
136	N.C.		Not used
137	ACKIO	I	Audio PLL test mode
138	MODE121	I	Clock mode select
139	PLLTEST		PLL test
140,141	TESTSEL0,1	O	Test signal
142	DCTEST	I	DC test mode
143	XVSYNCO	I/O	Vertical sync input/output
144	XHSYNCO	I/O	Horizontal sync input/output
145	VCLK	O	Video data clock
146	LVDD-146		Lch power supply
147-150	VD0-3	O	Video data bus
151	VSS-151		GND
152-155	VD4-7	O	Video data bus

Pin No.	Pin Name	I/O	Function and Operation
156	VDD-156		Power supply
157	VSS-157		GND
158	MDQ15	I/O	I/O data SDRAM
159	MDQ0	I/O	I/O data SDRAM
160	VDD-160		Power supply
161	MDQ14	I/O	I/O data SDRAM
162	MDQ1	I/O	I/O data SDRAM
163	VSS-163		GND
164	MDQ13	I/O	I/O data SDRAM
165	MDQ2	I/O	I/O data SDRAM
166	VDD-166		Power supply
167	MDQ12	I/O	I/O data SDRAM
168	MDQ3	I/O	I/O data SDRAM
169	VSS-169		GND
170	MDQ11	I/O	I/O data SDRAM
171	MDQ4	I/O	I/O data SDRAM
172	VDD-172		Power supply
173	MDQ10	I/O	I/O data SDRAM
174	LVDD-174		Lch power supply
175	MDQ5	I/O	I/O data SDRAM
176	VSS-176		GND
177	MDQ9	I/O	I/O data SDRAM
178	MDQ6	I/O	I/O data SDRAM
179	VDD-179		Power supply
180	MDQ8	I/O	I/O data SDRAM
181	MDQ7	I/O	I/O data SDRAM
182	VSS-182		GND
183	MCKI	I	SDRAM CLK input
184	VDD-184		Power supply
185	MCK	I	SDRAM CLK
186	VSS-186		GND
187	DQMLE	O	Lower byte DQ mask of extended SDRAM
188	LVDD-188		Lch power supply
189	DQMLM	O	Lower byte DQ mask of main SDRAM
190	DQMUE	O	Upper byte DQ mask of extended SDRAM
191	VDD-191		Power supply
192	DQMUM	O	Upper byte DQ mask of main SDRAM
193	XWE	O	Write signal of SDRAM
194	VSS-194		GND
195	XCAS	O	CAS of SDRAM
196	XRAS	O	RAS of SDRAM
197	VDD-197		Power supply
198	XCSE	O	CS of extended SDRAM
199	XCSM	O	CS of main SDRAM
200	VSS-200		GND
201	MA9	O	Bank sell and address
202	LVDD-202		Lch power supply
203	MA11	O	Bank sell and address
204	MA8	O	Bank sell and address
205	VDD-205		Power supply
206	MA10	O	Bank sell and address
207	MA7	O	Bank sell and address
208	VSS-208		GND

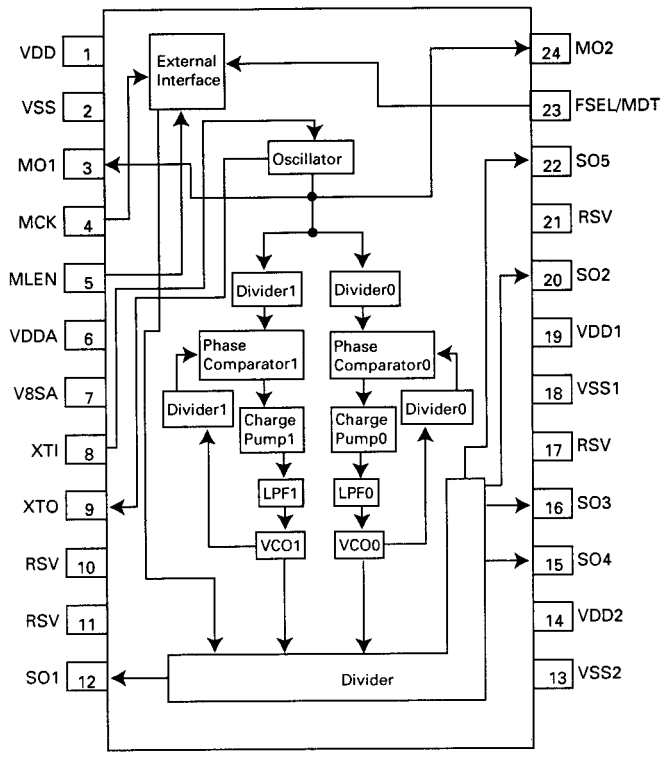
*MN677532JAUB



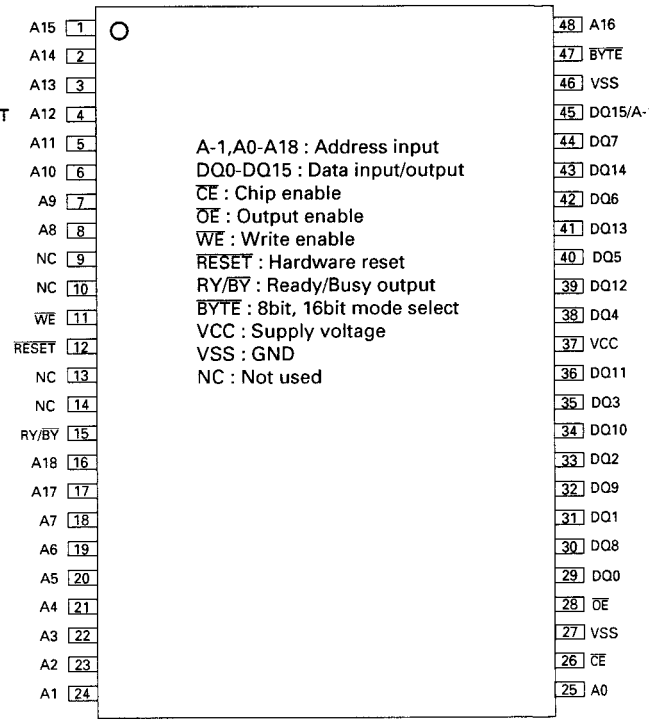
*TC74VCX04FT



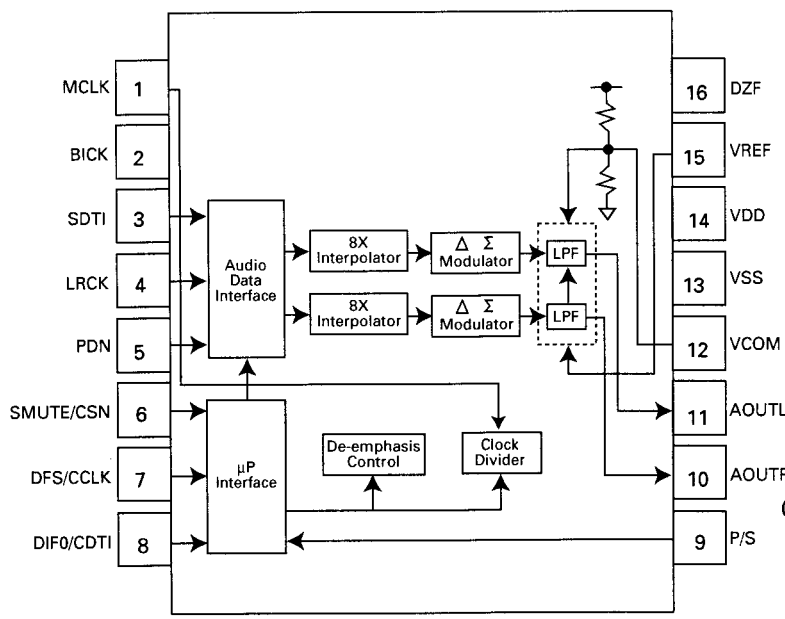
*SM8703AV



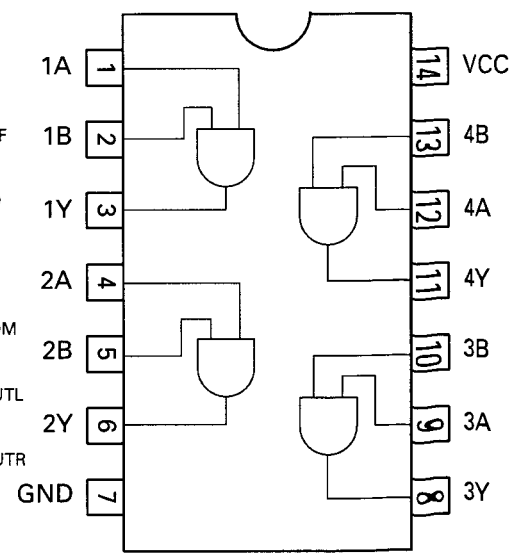
*PD6354B



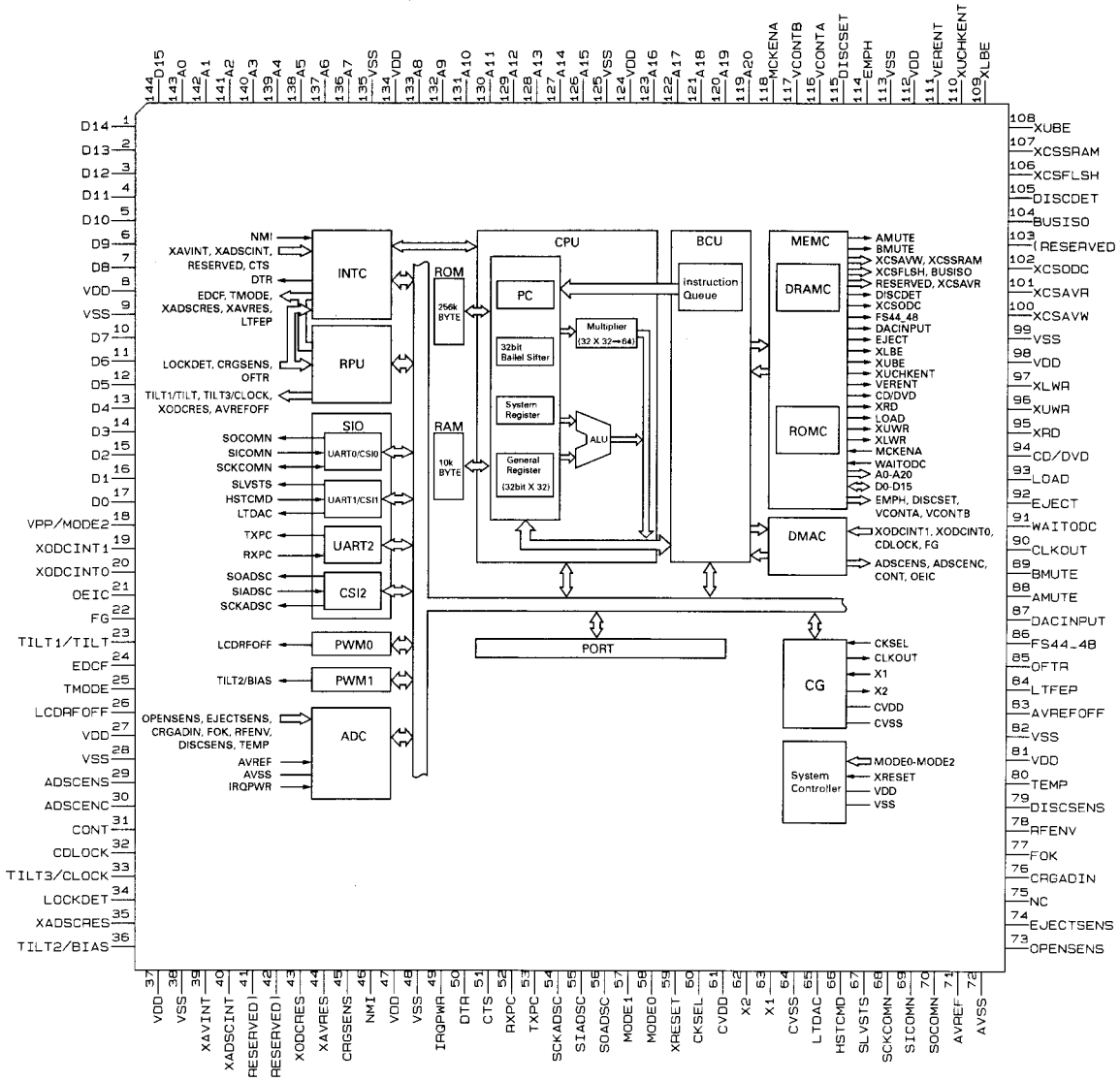
*AK4380VT



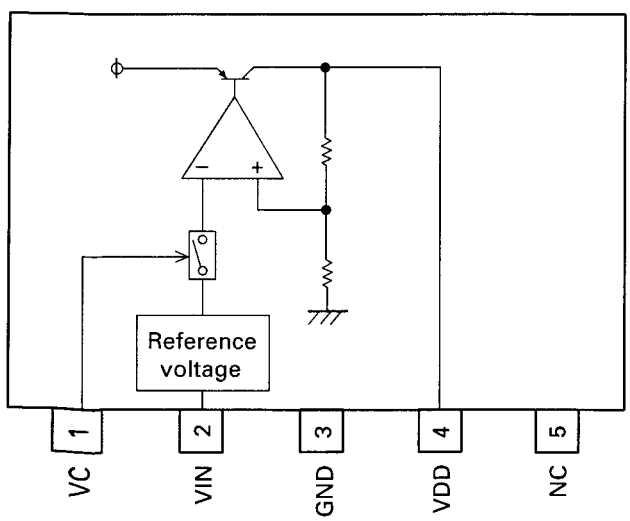
*TC74VCX08FT



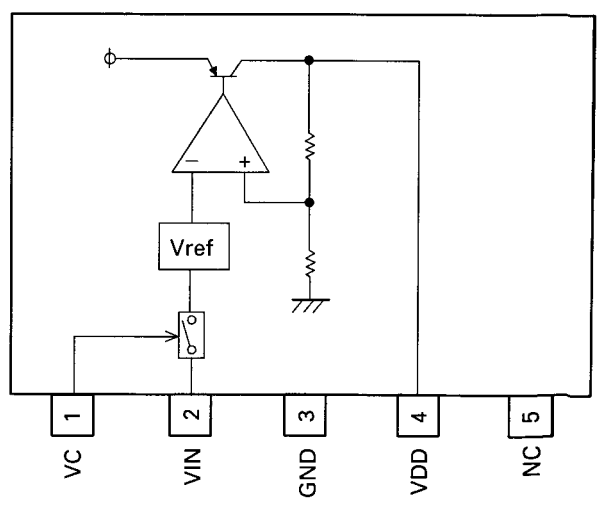
*PE5277A



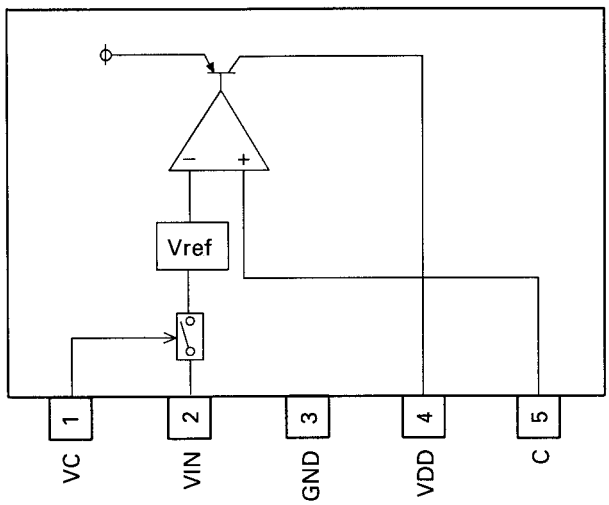
BA033SFP



BA18BC0WFP

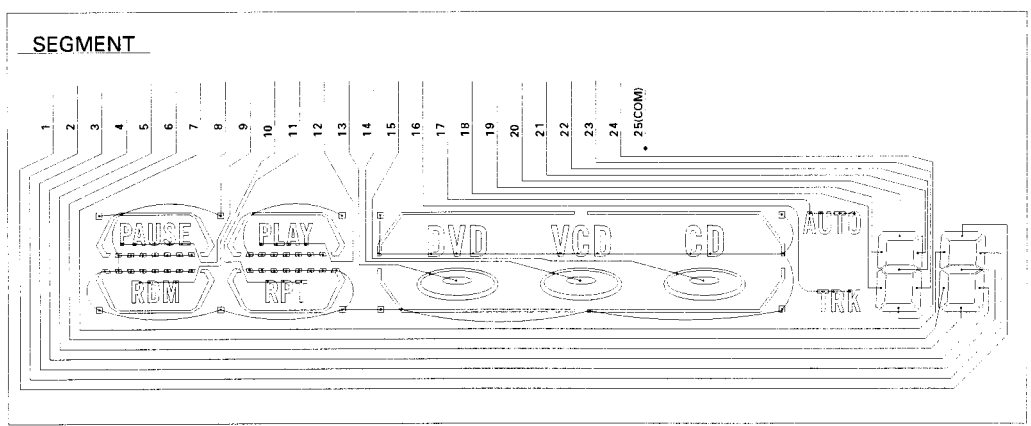


BA00BC0WFP

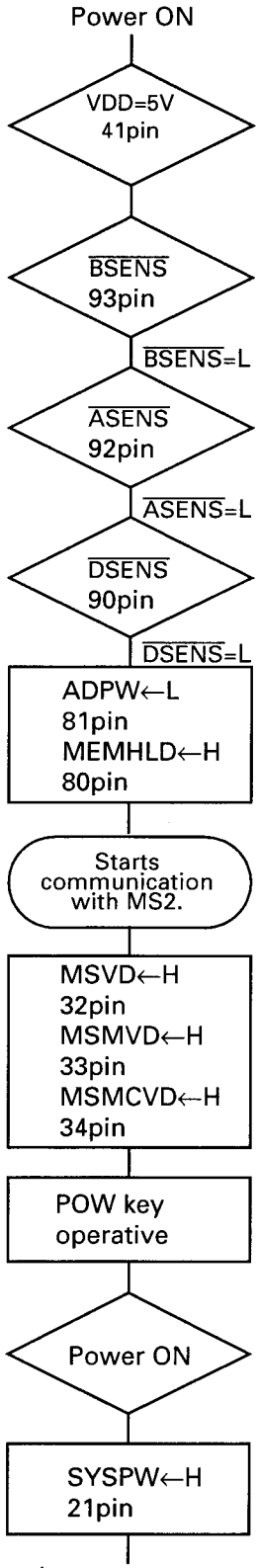


7.2.2 DISPLAY

● **CAW1687**



7.3 OPERATIONAL FLOW CHART



In this case, if only SYSTOMS(96pin) works and MSTOSYS(95pin) does not work, MS2 may be defective.

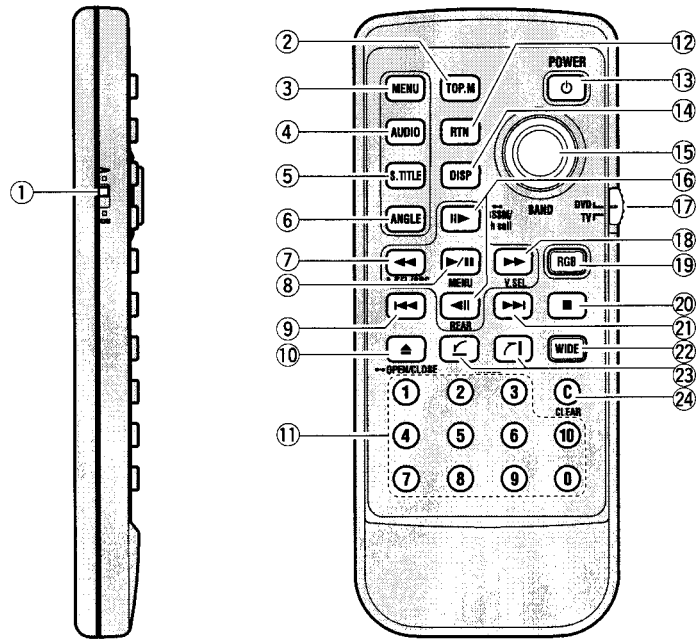
Completes power-on operation.
(After that, proceed to each source operation)

8. OPERATIONS AND SPECIFICATIONS

8.1 OPERATIONS

Key Finder

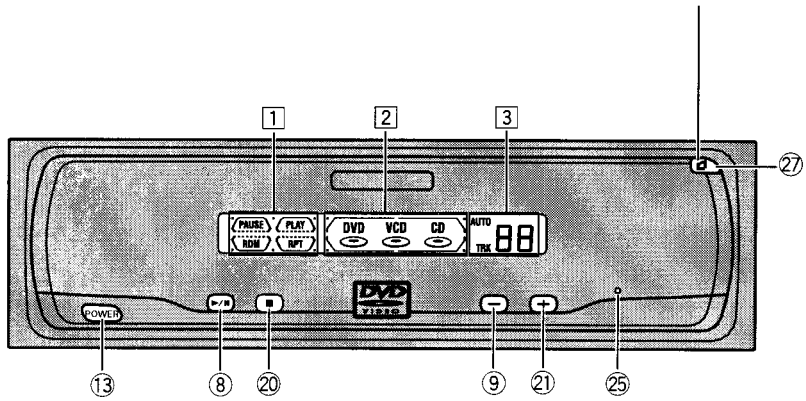
Remote Controller



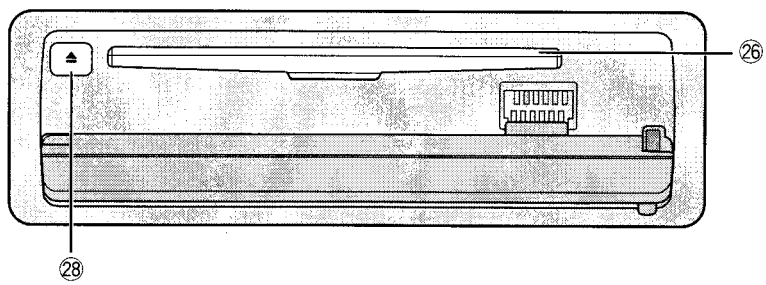
① Remote control code selection switch
② TOP MENU button
③ MENU button
④ AUDIO button
⑤ SUBTITLE button
⑥ ANGLE button
⑦ REVERSE (◄◄) button
⑧ PLAY/PAUSE (►/II) button
⑨ PREVIOUS (I◄◄) button
⑩ OPEN/CLOSE (▲) button
⑪ Number buttons
⑫ RETURN button
⑬ POWER button
⑭ DISPLAY button
⑮ Joystick
⑯ STEP (◄II)/(II►) buttons
⑰ Remote control operation mode switch
⑱ FORWARD (►►) button
⑲ RGB button
⑳ STOP (■) button
㉑ NEXT (►►I) button
㉒ WIDE button
㉓ ANGLE (⊂)/(⊂I) buttons
㉔ CLEAR button
㉕ RESET button
㉖ Disc loading slot
㉗ OPEN button
㉘ Eject button

This Product

Note:
- Use to open the front panel when loading or ejecting a disc.
- Be sure to close the front panel after loading or ejecting a disc.



1 Playback Mode Indicator
The indicator lights when any of the playback modes is operating.
2 Playback Disc Indicator
An indicator lights to show the type of disc playing.
3 CD Track Number Indicator
During CD playback, this indicates the number of the track playing.



Note:
- This product plays one standard 12 cm (5 in.) or 8 cm (3 in.) single disc at a time. Do not use an adapter when playing 8 cm (3 in.) disc.
- Do not insert anything into the Disc Loading Slot other than discs that are compatible with this product.
- The DVD function can be turned ON/OFF with the disc remaining in this product.
- A disc left partially inserted after ejection may incur damage or fall out.

Switching Power ON/OFF

Switching Power ON

When Using the IP-BUS Mode

1 **Switch the display image source to this product.**

For details, refer to the connected unit's manual.

2 **Press the SOURCE button on the Head Unit.**

Press repeatedly until DVD is selected, and the disc starts playing.

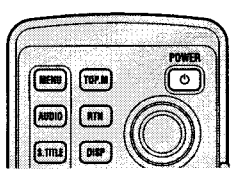
When Using the STAND ALONE Mode

Operate after confirming the Operation mode switch is set to DVD.

1 **Switch the display image source to this product.**

For details, refer to the connected unit's manual.

2



Press the POWER button.

Power to this product switches ON and a disc starts playing. When using a remote sensor, the remote sensor indicator lights.

Note:

- If you were previously playing a DVD, playback of that disc resumes from where you left off.
- With some discs, a menu may be displayed.

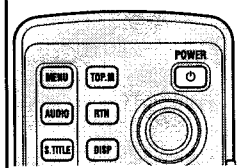
Switching Power OFF

When Using the IP-BUS Mode

Press the SOURCE button for 1 second on the Head Unit.

Power to the Multi-Channel AV Master Unit switches OFF.

When Using the STAND ALONE Mode



Press the POWER button.

Power to this product switches OFF. When using a remote sensor, the remote sensor indicator goes out.

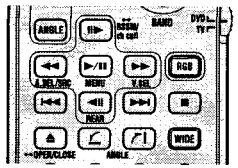
When using a rear display in the IP-BUS Mode

- Even if the source selected with the head unit is not DVD, if you switch power to this product ON with the POWER button, you can watch the DVD picture from this product on the rear display.
- Regardless of whether the head unit is switched ON/OFF, you can switch power to this product ON/OFF.

Precautions concerning the IP-BUS Mode

- When you have switched power to this product ON by pressing the POWER button, be sure not to forget to switch power to this product OFF. If you switch power to this product OFF after switching to DVD video display, the display shows that power to this product has been switched OFF.
- When you eject a source disc (CD or MD) selected with the head unit, power to the head unit switches OFF. Depending on the connection method, the picture on the rear display may disappear.

Disc (DVD/Video CD/CD) Playback



Press the PLAY/PAUSE (▶/II) button.

The playback mark (▶) is displayed for 4 seconds and the disc starts playing.

Note:

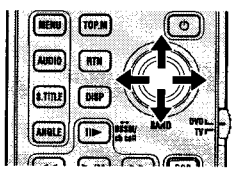
- Pressing the PLAY/PAUSE (▶/II) button when a disc is playing, pauses playback.
- If the last disc played was a DVD, playback starts from the point on that disc where you stopped play previously. With some discs, a menu may be displayed and playback may not be possible from where you left off previously.

Working with the Menu Screen

When DVDs offering menu or Video CDs featuring the PBC (Playback Control) function start playing, a menu is displayed.

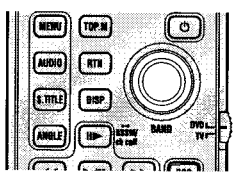
With DVDs

1



Use the joystick to select the desired MENU option.

2



Click the joystick.

Playback starts from the selected menu option.

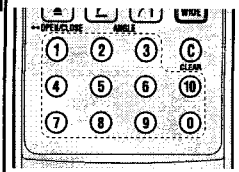
■ To Display the Menu

You can display the menu by pressing the MENU button or TOP MENU button while a disc is playing. Pressing either of these buttons again lets you start playback from the location selected from the menu. For details, refer to the instructions provided with the disc.

Note:

- The way to display the menu differs depending on the disc.

With Video CDs



Press the number buttons to select a desired menu option.

Playback starts from the selected menu option.
Operation with the joystick is not possible.

■ To Display the Menu

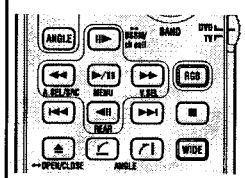
You can display the menu by pressing the RETURN button while PBC playback. For details, refer to the instructions provided with the disc.

Note:

- When menu are two or more pages long, press the PREVIOUS (I◀◀)/NEXT (▶▶I) button to switch between displays.
- To play a disc without using a menu (without PBC playback), when the disc is stopped press the appropriate number button to select the desired track. To return to PBC playback, stop playback and press the PLAY/PAUSE (▶/II) button.

Chapter and Track Advance/Return

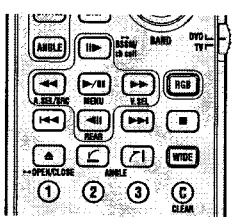
Skipping to the Next Chapter/Track



During play, press the NEXT (▶▶I) button.

Chapter/track numbers are displayed for 8 seconds and you advance to the next chapter/track.

Returning to the Previous Chapter/Track



During play, press the PREVIOUS (I◀◀) button.

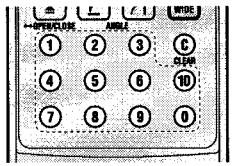
Chapter/track numbers are displayed for 8 seconds and you return to the beginning of the current chapter/track.

Press the PREVIOUS (I◀◀) button twice in succession takes you to the beginning of the chapter/track before the current chapter/track.

Specifying Title/Chapter/Track (Direct Search)

Specifying Title

DVD



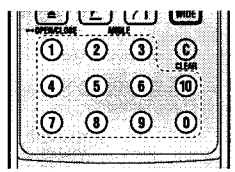
Press the number button corresponding to a desired title number when the disc is stopped.

Title number is displayed for 8 seconds and playback starts from the selected title.

To select 3, press button 3.
To select 10, press buttons 10 and 0 in order.
To select 23, press buttons 10, 10 and 3 in order.

Specifying Chapter

DVD



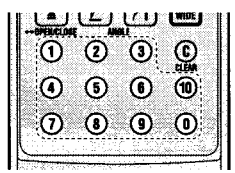
Press the number button corresponding to a desired chapter number during playback.

Chapter number is displayed for 8 seconds and playback starts from the selected chapter.

To select 3, press button 3.
To select 10, press buttons 10 and 0 in order.
To select 23, press buttons 10, 10 and 3 in order.

Specifying Track

Video CD



Press the number button corresponding to a desired track number.

Track number is displayed for 8 seconds and playback starts from the selected track.

To select 3, press button 3.
To select 10, press buttons 10 and 0 in order.
To select 23, press buttons 10, 10 and 3 in order.

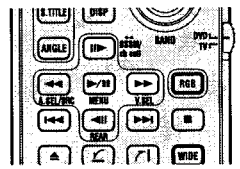
Note:

- With some discs, the prohibited mark "⃠" may be displayed and operation may not be possible.
- *With Video CD, Direct Search is not possible during PBC playback.*

Disc Fast Forward/Reverse

Fast Forward

1



During play, continue pressing the FORWARD (►►) button.

The fast forward mark (►►) is displayed while pressing the button and disc fast forward is performed.

2 **Release the FORWARD (►►) button at the point you want to watch/listen.**

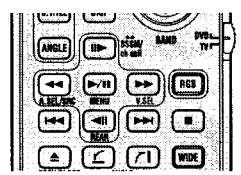
Playback resumes from that point.

Note:

- If you continue pressing the FORWARD (►►) button for 5 seconds, the color of the fast forward mark (►►) changes from white to blue. When this happens, fast forward continues even if you release the FORWARD (►►) button. To resume playback at a desired point, press the PLAY/PAUSE (►/II) button.
- If you fast forward to the end of a CD, fast forward continues from the beginning of the disc.
- Fast forward may not be possible at certain locations on some discs. If this happens, normal playback automatically resumes.

Fast Reverse

1



During play, continue pressing the REVERSE (◄◄) button.

The fast reverse mark (◄◄) is displayed while pressing the button and disc fast reverse is performed.

2 **Release the REVERSE (◄◄) button at the point you want to watch/listen.**

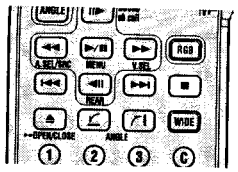
Playback resumes from that point.

Note:

- If you continue pressing the REVERSE (◄◄) button for 5 seconds, the color of the fast reverse mark (◄◄) changes from white to blue. When this happens, fast reverse continues even if you release the REVERSE (◄◄) button. To resume playback at a desired point, press the PLAY/PAUSE (►/II) button.
- If you fast reverse to the beginning of a CD, normal playback resumes.
- Fast reverse may not be possible at certain locations on some discs. If this happens, normal playback automatically resumes.

Stopping Playback

DVD Video CD

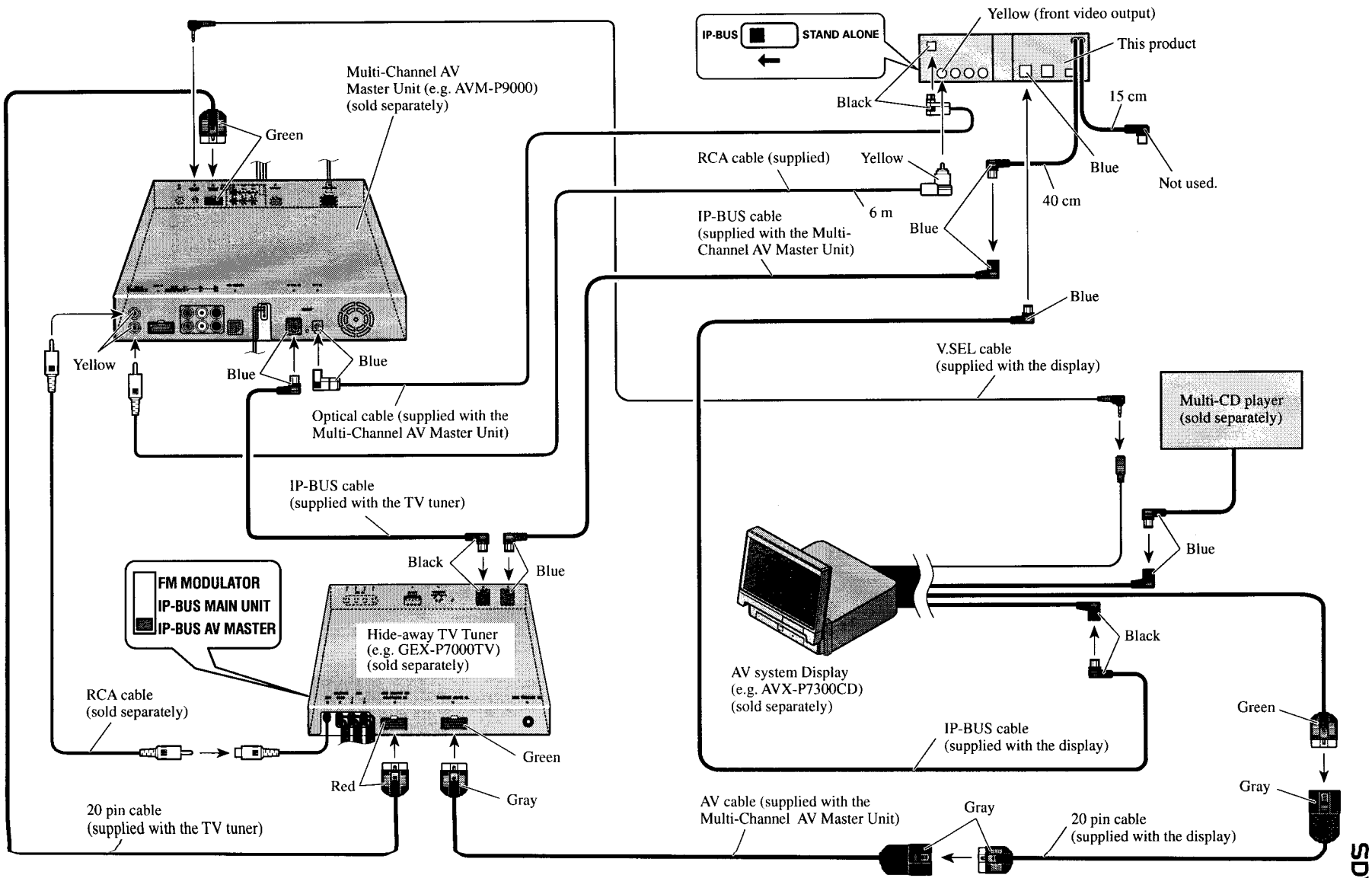


Press the STOP (■) button.

Note:

- When you stop DVD or Video CD playback (during PBC playback only) by pressing the STOP (■) button, that location on the disc is memorized enabling playback from that point when you play the disc again.

When Connecting the Multi-Channel AV Master Unit

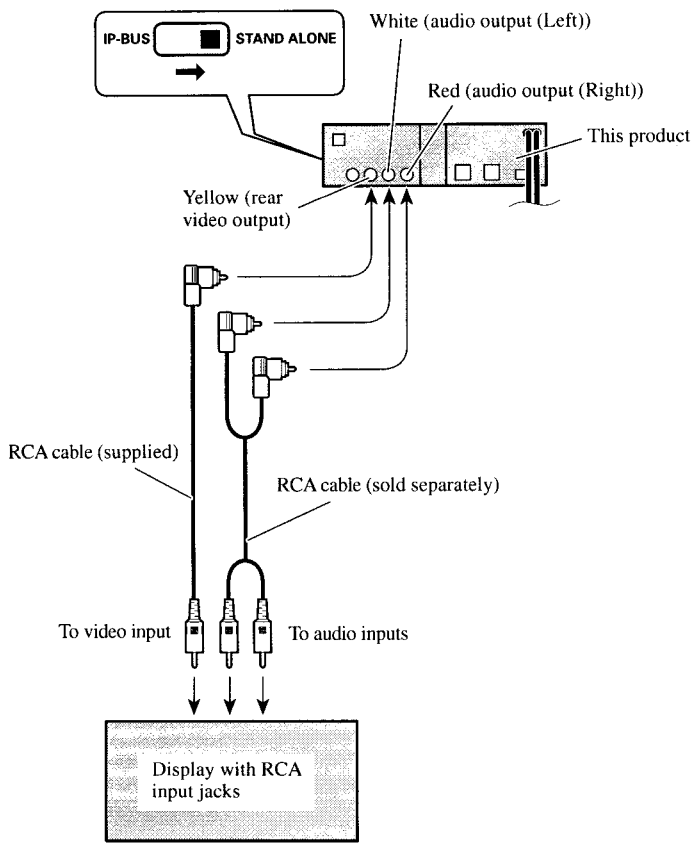


When Using a Display Connected Rear Video Output

This product's rear video output is for connection of a display to enable passengers in the rear seats to watch the DVD or Video CD.

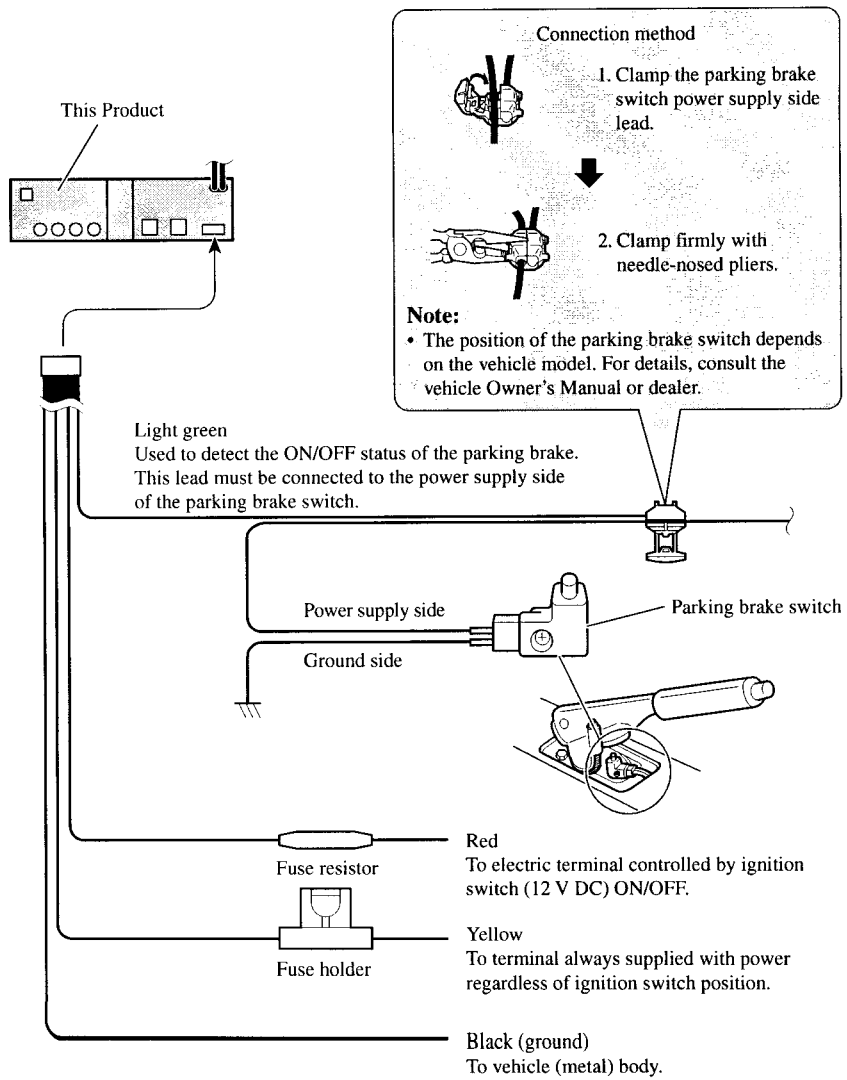
⚠ WARNING

- NEVER install the display in a location that enables the Driver to watch the DVD or Video CD while Driving.



Connecting the Power Cord

This product comes with two kinds of power cord. Use the short cord when installing this product in the dashboard, and the long cord when installing it on the floor.


This Product
Connection method
1. Clamp the parking brake switch power supply side lead.
2. Clamp firmly with needle-nosed pliers.
Note:
• The position of the parking brake switch depends on the vehicle model. For details, consult the vehicle Owner's Manual or dealer.
Light green
Used to detect the ON/OFF status of the parking brake.
This lead must be connected to the power supply side of the parking brake switch.
Power supply side
Parking brake switch
Ground side
Fuse resistor
Red
To electric terminal controlled by ignition switch (12 V DC) ON/OFF.
Fuse holder
Yellow
To terminal always supplied with power regardless of ignition switch position.
Black (ground)
To vehicle (metal) body.

8.2 SPECIFICATIONS

General

Power source ..... 14.4 V DC (10.8 – 15.1 V allowable)
Grounding system ..... Negative type
Max. current consumption ..... 4 A
Backup current ..... 10 mA or less
Dimensions
(DIN)
(chassis) ..... 180 (W) × 50 (H) × 150 (D) mm
[7-1/8 (W) × 2 (H) × 5-7/8 (D) in]
(nose) ..... 188 (W) × 58 (H) × 19 (D) mm
[7-3/8 (W) × 2-1/4 (H) × 3/4 (D) in]
(D)
(chassis) ..... 178 (W) × 50 (H) × 155 (D) mm
[7 (W) × 2 (H) × 6-1/8 (D) in]
(nose) ..... 170 (W) × 46 (H) × 14 (D) mm
[6-3/4 (W) × 1-3/4 (H) × 1/2 (D) in]
Weight ..... 1.3 kg (2.9 lbs)

Audio

(with DVD, at Sampling frequency 96 kHz)
Frequency response ..... 5 – 44,000 Hz
Signal-to-noise ratio [For U.S. and Canadian models]
..... 97 dB (1 kHz) (IHF-A network)
(CD: 96 dB (1 kHz) (IHF-A network))
Signal-to-noise ratio [Other area models]
..... 97 dB (1 kHz) (IEC-A network)
(CD: 96 dB (1 kHz) (IEC-A network))
Dynamic range ..... 96 dB (1 kHz)
(CD: 95 dB (1 kHz))
Distortion ..... 0.008 % (1 kHz)
Output Level ..... 1.0 V (1 kHz, 0 dB)
Number of channels ..... 2 (stereo)

Player

System ..... DVD-Video, Video CD,
Compact disc audio system
Usable discs .... DVD-Video, Video CD, Compact disc
Signal format
..... Sampling frequency: 44.1/48/96 kHz
Number of quantization bits: 16/20/24; linear
Region Number
..... For U.S. and Canadian models: 1
For European models: 2
For Southeast Asian models: 3
For South American and Oceanian models: 4

Video

Output level ..... 1.0 Vp-p/75 Ω (±0.2 V)

Note:

- Specifications and the design are subject to possible modification without notice due to improvements.